

# CENTURY®

LEGENDARY LEADERSHIP

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## OWNER'S MANUAL

### SERIES 10 GEN II ALUMINUM & STEEL CARRIERS

#### INSTALLATION, OPERATION, MAINTENANCE & PARTS

**NOTE: MANUAL** including SPECIFICATIONS, subject to change without notice  
All ratings specified are based on structural factors only,  
not vehicle capacities or capabilities.

## CENTURY®

Miller Industries PA Operations  
2755 Kirila Blvd.  
Hermitage, PA 16148

PN. 0540039  
REV. 08/2025

## LIMITED WARRANTY

MILLER, IND., ("Miller"), warrants to the original purchaser that each new Miller product will be free from defects in material and workmanship for a period of twelve (12) months from date placed in service. The purchaser must promptly notify Miller in writing of any failure in material or workmanship. In no event shall Miller accept such notification later than twelve (12) months from date placed in service.

Miller's obligation under this warranty, statutory or otherwise, is limited to the repair or replacement at the Miller factory, or at a point designated by Miller, of such part or parts as shall appear upon inspection by Miller to be defective in material or workmanship. New or re-manufactured parts will be used for any replacement at Miller's option. This warranty is not transferable. This warranty does not obligate Miller to bear the cost of labor or transportation charges in connection with the repair or replacement of any parts found to be defective, nor shall it apply to a product upon which repairs or alterations have been made unless authorized by Miller.

EXCEPT AS EXPRESSLY SET FORTH IN THIS WARRANTY, MILLER MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND HEREBY DISCLAIMS ALL OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Miller shall in no event be liable for claimed downtime, claimed loss of profits or good will, or any other special, incidental, indirect, or consequential damages concerning or relating to any product or parts, whether based on negligence, strict liability, breach of contract, breach of warranty, misrepresentation or any other legal theory, regardless of whether the loss resulted from any general or particular requirement which Miller knew or had reason to know about at the time of sale.

MILLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE FINISHED PRODUCTS MANUFACTURED OR SUPPLIED BY ANOTHER MANUFACTURER AND SUPPLIED BY MILLER TO PURCHASER, including, but not limited to, any vehicle to which a Miller product may be affixed or any accessories or wire rope, and MILLER EXPRESSLY DISCLAIMS ANY IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AS TO SUCH EQUIPMENT OR PRODUCTS. This language shall in no way affect or diminish the rights of the purchaser to rely on such warranties as are extended by such manufacturers or suppliers. Miller shall, to the extent permitted under applicable law, pass on to the purchaser such manufacturer's or seller's warranty.

Miller, whose policy is one of continuous improvement, reserves the right to improve its products through changes in design or materials as it may deem desirable without being obligated to incorporate such changes in products previously sold. This warranty is not intended to cover or include the following items, which are set forth by way of example and not limitation:

- A. Normal deterioration of trim, paint, lettering, and appearance items due to wear or exposure to weather, road conditions, road treatments, etc.
- B. Any damage or defect due to accident, misuse, abuse, operation exceeding rated loads, improper or unauthorized repairs, failure to provide reasonable and necessary maintenance, or uses of which the equipment was not designed or intended.
- C. Alterations or modifications that affect performance, operations or reliability.
- D. Normal maintenance parts including, but not limited to, wear pads, bushings, wire rope, mudflaps, fenderettes, light bulbs, hydraulic oil, filters, and tow sling belts.

**IT IS EXPRESSLY UNDERSTOOD THAT MILLER MAKES NO IMPLIED WARRANTY THAT MILLER PRODUCTS SHALL BE FIT FOR THE PURPOSE OF LIFTING OR MOVING PEOPLE OR FOR ANY OTHER IMPROPER USE.**



Miller Industries Towing Equipment Inc.  
PA Carrier Operations  
Hermitage, PA

SERIAL NUMBER

|  |
|--|
|  |
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## OWNER, USER AND OPERATORS:

MILLER appreciates your choice of our carrier for your application. Our number one priority is user safety which is best achieved by our joint efforts. We feel that you can make a major contribution to safety if you, as the equipment owner and operators:

1. Comply with federal, state and local regulations.
2. Read, understand and follow the Instructions in the manual.
3. Use good, safe work practices in a common sense way.
4. Only have authorized and trained operators running the carrier.

Also contained in this manual is a Parts Section for your carrier. Use of other than factory or factory authorized parts will render the warranty void.



## WARNING

**Owner's manual MUST be kept with vehicle at all times. Manual must be read before operating carrier unit.**

This manual is supplied to you with your Miller unit to better familiarize the owner/operator with the proper operation and maintenance of their unit.

The information contained in this manual should be thoroughly understood by all operating and maintenance personnel to prolong the operating life of this unit.

Field modification of this unit without the advice and consent of our Engineering Department will void all guarantees pertaining to both purchased components used in the manufacture of this unit, as well as structurally fabricated parts supplied by us.

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## Section I - SAFETY PRECAUTIONS

Presented in the interest of safety for all carrier operators.



### NOTICE

You are obligated to operate your carrier safely. You can be held legally responsible for injuries or damages resulting from unsafe operating practices.

The manufacturer's recommendations for operating this carrier can help you avoid unsafe practices and their bad consequences. These recommendations are contained in this manual.

Miller Industries is not responsible for the results of any unsafe practice of carrier operators. Furthermore, the division is not responsible for the failure of the carrier or its accessories resulting from improper maintenance.

The danger from a vehicle does not cease when it is disabled or wrecked. Recovering and towing vehicles can be dangerous, too! The danger threatens carrier operators and everyone close at hand. As a carrier operator you must develop an awareness of the hazards involved. You must use every safeguard within reason to prevent injuries.

For each step in operating your carrier, develop the habit of asking yourself if it is safe to proceed. Carefully check all rigging (especially snatch blocks) before starting a heavy lift or pull.

We cannot warn you of all the possible dangers you will encounter. But we will tell you of the most common hazards we know about. Learn them well.



## **Section I - SAFETY PRECAUTIONS**

- 1.1 Improper use of this equipment can be dangerous! Incorrect operation can result in bodily injury to the operator and bystanders. Therefore, a thorough understanding of the "operating principles" and "operating instructions" as found in this manual is essential.
- 1.2 Study each job to be done. Apply common sense judgment to assure safety to yourself and bystanders.
- 1.3 Plan ahead. Work safely. Avoid accidental damage and injury. If an accident or fire does occur, react quickly with the tools and skills at hand. Know how to use a first aid kit and a fire extinguisher - and where to get assistance.
- 1.4 Read and understand the following instructions.



1. READ THE MOUNTING/OPERATING/MAINTENANCE MANUAL FOR WARNINGS AND PRECAUTIONS.
2. NEVER TAKE ANYTHING FOR GRANTED. DON'T ASSUME THAT EVERYTHING IS ALL RIGHT AT THE START OF WORK TODAY JUST BECAUSE EVERYTHING SEEMED ALL RIGHT AT THE END OF WORK YESTERDAY. BEFORE BEGINNING OPERATION, THOROUGHLY INSPECT THE ENTIRE CARRIER TO BE SURE IT IS IN GOOD OPERATING CONDITION.
3. VISUALLY INSPECT THE CARRIER FOR EVIDENCE OF PHYSICAL DAMAGE, SUCH AS CRACKING, BENDING, OR DEFORMATION OF PLATES OR WELDS. INSPECT CAREFULLY FOR CRACKING OR FLAKING OF PAINT, WHICH MAY INDICATE A DANGEROUS CRACK IN THE STRUCTURE BENEATH. DO NOT OPERATE UNTIL REPAIRS ARE MADE.
4. LOOSE OR MISSING HARDWARE, BOLTS, NUTS, AND PINS SHOULD BE PROPERLY TIGHTENED OR REPLACED WITH MANUFACTURER'S SPECIFIED HARDWARE.
5. CHECK FOR FLUID LEAKS. HYDRAULIC SYSTEM LEAKS MUST BE CORRECTED BEFORE THE CARRIER IS OPERATED. INSPECT ALL HYDRAULIC HOSES, ESPECIALLY THOSE WHICH FLEX OR MOVE IN SERVICE. AND REPLACE IF NECESSARY. SECURE ALL CAPS AND FILLER PLUGS FOR ALL SYSTEMS.
6. YOUR CLOTHING SHOULD BE RELATIVELY CLOSE FITTING.

## **Section I - SAFETY PRECAUTIONS (cont'd)**

7. ALWAYS WEAR PROTECTIVE ITEMS SUCH AS SAFETY GLASSES, GLOVES, REFLECTIVE CLOTHING AND SAFETY SHOES.
8. BEFORE OPERATING THE CARRIER, REFER TO THE CARRIER'S CAPACITY LABELS ON THE BED SILL AND INSIDE THE DOOR OF THE CAB AND IN THE SPECIFICATIONS SECTION OF YOUR OPERATING MANUAL. FOR CHASSIS CAPACITY, CONSULT YOUR TRUCK DEALER. NEVER EXCEED MANUFACTURER'S LOAD RATING. THE STIPULATIONS PERTINENT TO THESE RATINGS SHALL ALWAYS BE CAREFULLY OBSERVED. RATINGS SHOWN ARE BASED ON THE HYDRAULIC, MECHANICAL, OR STRUCTURAL DESIGN OF THE CARRIER RATHER THAN STABILITY. IT IS ALWAYS UNSAFE TO APPLY ANY LOAD WHICH IS GREATER THAN RATED LOAD SHOWN ON THE DATA PLATE.
9. DO NOT USE THIS EQUIPMENT EXCEPT ON SOLID, LEVEL SURFACE WITH THE TRUCK BRAKES LOCKED.
10. OPERATE ALL CONTROLS SLOWLY AND SMOOTHLY TO AVOID DAMAGE TO THE CARRIER OR INJURY TO PERSONNEL.
11. DO NOT OPERATE, WALK, OR STAND BEHIND A CARRIER BED OR CRAWL UNDER A SUSPENDED BED.
12. NEVER EXTEND THE CARRIER BED OVER ANYONE.
13. DO NOT USE THE CARRIER TO TRANSPORT PEOPLE.
14. WHEN THE WHEEL LIFT IS TOWING A VEHICLE, KEEP THE WHEEL RETAINERS AT LEAST 18 INCHES ABOVE LEVEL GROUND. THIS CLEARANCE IS NECESSARY TO PREVENT THE WHEEL RETAINERS FROM COLLIDING WITH THE GROUND WHEN DRIVING UP AN ABRUPT INCLINE.
15. FOR TRAVEL, THE BED AND WHEEL LIFT MUST BE IN STOWED POSITION AND THE PTO DISENGAGED.

## Section I - SAFETY PRECAUTIONS



### **WARNING**

**ONLY AUTHORIZED AND TRAINED PERSONNEL  
SHOULD BE PERMITTED TO OPERATE THIS CARRIER  
UNSUPERVISED.**

TRAINED PERSONNEL ARE THOSE WHO HAVE WORKED UNDER EXPERIENCED SUPERVISION AND HAVE PERFORMED ALL CARRIER MANEUVERS, HAVE READ THE MOUNTING, OPERATING AND MAINTENANCE MANUAL, WARNINGS AND PRECAUTIONS, AND UNDERSTAND AND HAVE HAD EXPLAINED TO THEM BY THEIR EMPLOYER THE HAZARDS OF OPERATING THE CARRIER. THEY MUST BE FAMILIAR WITH THE HAZARDS OF OPERATING AT A SITE WHERE ELECTRIC POWER LINES, IRREGULAR GROUND CONTOUR, WATER, ICE, MUD, OR OTHER CONDITIONS CAN INTERFERE WITH ORDINARY CAREFUL OPERATION OF THIS CARRIER.

**AN UNTRAINED OPERATOR SUBJECTS HIMSELF AND  
OTHERS TO DEATH OR SERIOUS INJURY.**



### **WARNING**

**MAKE CERTAIN THE CARRIER BED IS  
CLEAR OF THE BED LOCK  
BEFORE ATTEMPTING TO TILT BED.**



### **WARNING**

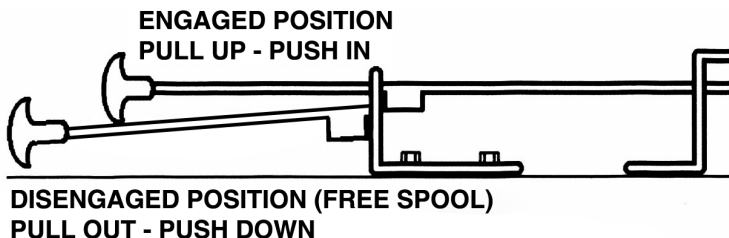
**USE SAFETY CHAINS ON ALL TOWING  
AND LIFTING APPLICATIONS.**

## Section I - SAFETY PRECAUTIONS



### WARNING

**DO NOT ATTEMPT TO OPERATE WINCH  
UNLESS WINCH CLUTCH IS FULLY ENGAGED!**



### WINCH OPERATION

1. TO DISENGAGE CLUTCH: RELEASE TENSION ON WINCH CABLE, PULL HANDLE AWAY FROM WINCH (TOWARD OPERATOR), AND PUSH DOWN, LOCKING IT INTO "L" BRACKET.
2. TO FULLY ENGAGE CLUTCH: LIFT CLUTCH ROD HANDLE OUT OF THE "L" BRACKET, RUN WINCH AROUND ONE COMPLETE ROTATION OF THE DRUM. ROD MUST MOVE TOWARD WINCH TO BE FULLY ENGAGED, AND MUST BE LOCKED INTO "L" BRACKET.  
**NOTE: NEVER OPERATE WINCH UNDER LOAD IF CLUTCH IS NOT COMPLETELY ENGAGED.**
3. DO NOT DISENGAGE CLUTCH WHILE WINCH IS UNDER LOAD.
4. DO NOT ALLOW BYSTANDERS, OPERATORS, OR OTHER PERSONNEL TO GO NEAR, BEHIND, OR UNDER A LOAD SUPPORTED BY THE WINCH.
5. **ALWAYS ATTACH FRONT SAFETY CHAINS BEFORE ATTACHING OR REMOVING REAR CHAINS, OR WORKING AROUND A LOAD SUPPORTED BY THE WINCH.** THE FRONT SAFETY CHAINS SHOULD BE RE-ADJUSTED BEFORE DRIVING UNDER LOAD.
6. STAND CLEAR OF CABLE WHILE UNDER LOAD. DO NOT ATTEMPT TO GUIDE CABLE.
7. DO NOT EXCEED WORKING LIMITATIONS OF THE WINCH OR WINCH CABLE. BE SURE THE CABLE, WINCH, AND LOADING APPARATUS ARE DAMAGE FREE BEFORE APPLYING LOAD TO WINCH.
8. DO NOT USE WINCH TO LIFT OR SUPPORT PERSONNEL.
9. ALWAYS MAINTAIN A MINIMUM OF 5 WRAPS OF CABLE AROUND WINCH DRUM.



## Section II - SPECIFICATIONS

### 2.1 CERTIFICATION LABEL

Federal law requires that the final stage manufacturer, ie., that person or company installing new equipment on a new chassis, must certify the completed vehicle by obtaining, completing and affixing to the door post on the driver's side of the vehicle, a Certification Label similar to the one shown. See Figure 2.1.

|                                       |  |
|---------------------------------------|--|
| MANUFACTURED BY:                      |  |
| DATE OF MANUFACTURE _____ mo _____ yr |  |
| INCOMPLETE VEHICLE MANUFACTURED BY:   |  |
| DATE INC. VEH. MFD. _____ mo _____ yr |  |
| GVWR _____                            |  |
| GAWR FRONT _____ with                 |  |
| _____ tires,                          |  |
| _____ rims, @ _____ psi cold _____    |  |
| GAWR INTERMEDIATE (1) _____ with      |  |
| _____ tires,                          |  |
| _____ rims, @ _____ psi cold _____    |  |
| GAWR INTERMEDIATE (2) _____ with      |  |
| _____ tires,                          |  |
| _____ rims, @ _____ psi cold _____    |  |
| GAWR Rear _____ with                  |  |
| _____ tires,                          |  |
| _____ rims, @ _____ psi cold _____    |  |
| THIS VEHICLE CONFORMS TO ALL          |  |
| APPLICABLE FEDERAL MOTOR VEHICLE      |  |
| SAFETY STANDARDS IN EFFECT IN:        |  |
| _____ mo _____ yr                     |  |
| VEHICLE IDENTIFICATION NUMBER:        |  |
| VEHICLE TYPE: _____                   |  |

Figure 2.1

## Section II - SPECIFICATIONS

### 2.2 SERIAL NUMBERS/SPECIFICATION LABELS

Each carrier will have a Serial Number/Specification Label mounted to the carrier. This label will display the Model Number, Serial Number, Lift/Tow and Cable Ratings.

### 2.3 RATINGS

The Series 10 carrier can be mounted on a variety of chassis ranging from light duty to medium duty. Certain light duty chassis may not perform properly at the carrier's rated capacities. Be aware of the ratings on the carrier and the chassis on which it is mounted. Operate your carrier safely and do not exceed any ratings.

| SERIES 10 CARRIER                                                                   |        |
|-------------------------------------------------------------------------------------|--------|
| BED RATING (LBS)                                                                    | 10,000 |
| All ratings are based on structural factors and not vehicle capability or capacity. |        |

| SERIES 10 UNDERLIFT RATING (LBS) |        |       |                         |                |
|----------------------------------|--------|-------|-------------------------|----------------|
|                                  | L-arms | Forks | Pintle<br>Ball<br>Hitch | Pintle<br>Hook |
| Lift Rating<br>14,500 GVW        | 2,000  | 2,000 | 2,000                   | 2,000          |
| Lift Rating                      | 3,000  | 3,000 | 3,000                   | 4,000          |
| Tow Rating                       | 7,500  | 7,500 | 7,500                   | 7,500          |

**WARNING**

When the chassis rear axle weight rating is only 11,000 lbs., do not exceed load limits of 5000 lbs. on the bed or a combined 2200 lbs. on the bed and 1500 lbs. on the tow bar.

| WINCH AND CABLE SPECIFICATIONS |               |                               |                                  |
|--------------------------------|---------------|-------------------------------|----------------------------------|
| WINCH                          | CABLE         | IWRC NOMINAL<br>STRENGTH LBS. | RATED WORKING<br>LOAD LIMIT LBS. |
| 8000 LB                        | 3/8 x 50 ft.  | 15,100                        | 3500                             |
| 8000 LB Slidewinder            | 3/8 x 75 ft.  | 15,100                        | 3500                             |
| 12,000 LB                      | 7/16 x 50 ft. | 20,400                        | 4700                             |
| 12,000 LB Slidewinder          | 7/16 x 75 ft. | 20,400                        | 4700                             |

## Section II - SPECIFICATIONS

### 2.4 CHAIN APPLICATIONS

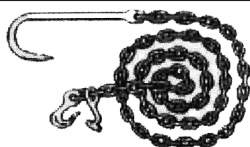


## CAUTION

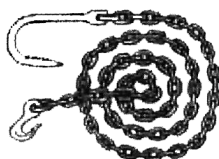
Not all chains are alike, even though they may appear so. Applications using one (1) chain must be a chain with twice the test strength.

For additional information, consult the following for proper practices on towing, towing equipment use, and vehicle bindings:

AAA Towing Manual  
International Institute for Towing and Recovery -  
(Publications by University of Georgia)



**J-Hook (Long Conventional)**  
Attaching or Binding Chain  
Application: Carrier (rear)  
Wrecker (front)  
Two (2) required



**J-Hook (Sports Car Type)**  
Attaching or Binding Chain  
Application: Carrier (rear)  
Two (2) required



**Safety Chain**  
Application: Carrier  
Wrecker



**J-Type Hook-up Chain**  
Application: Carrier (front)  
One (1) required



**T-Type Hook-up Chain**  
Application: Carrier (front)  
One (1) required



## **Section II - SPECIFICATIONS**

### **2.5 STANDARD EQUIPMENT**

- Aluminum or Steel Body
  - Aluminum Body:
    - heavy duty extruded sill with integral full length graphite-impregnated wear strips top and bottom
    - front left and right chain trays
    - extruded double-box sides
    - rear sill reinforcements
    - 6 chain locks
  - Steel Body:
    - 3/16 deck plate floor
    - front left and right chain trays
    - 2 x 2 structural tubes
    - floor level sides
    - 6 chain locks
    - black paint or prime
- Releasable L-arm wheel retainers
- Mechanical anti-tilt
- Inboard or outboard tilt cylinders
- Three light taillight housings
- Wheel lift
- Illuminated dual controls
- 6 side body marker lights (3 per side)
- Body lock
- Mudflaps
- Federal standard 108 lighting
- Tow light plug
- Water resistant junction boxes for wire harness connection
- Lubrication fittings on all pivot points
- 8,000 lb. hydraulic winch with 3/8 x 50 ft. cable
- Pilot operated holding valves on tilting and lifting functions
- Back up alarm
- Cab protector with aluminum trim
- Aluminum toolbox (33L x 18H x 18D)
- Direct mount pump
- Cable tensioner
- Cable roller guide
- Winch free spool extension
- Two safety chains

### **2.6 OPTIONAL EQUIPMENT**

- |                                        |                             |
|----------------------------------------|-----------------------------|
| • Aluminum blade rails                 | • 8,000 lb. Planetary winch |
| • Removable tube rails                 | • Stationary cab protector  |
| • Floor level sides with stake pockets | • PTO                       |
| • Trailer style rub rails              | • Engine mount clutch pump  |
| • Additional chain locks               | • Retractable ladder        |
| • 3/16 smooth floor                    |                             |

## Section II - SPECIFICATIONS

### 2.6 OPTIONAL EQUIPMENT (cont'd)

- Aluminum tool box (33L x 18H x 18D)
- Aluminum tool box (49L x 18H x 18D)
- Aluminum tool box (65L x 18H x 18D)
- Steel tool box (36L x 18H x 18D)
- Steel tool box (48L x 18H x 18D)
- Steel tool box (60L x 18H x 18D)
- Factory installation
- Steel body paint (other than black)
- Pivoting L-arms
- AutoGrip™ II wheel lift
- 102 inch wide body
- Galvanized subframe
- Air free spool winch
- Right Approach (steel body)
- SST body
- Wireless remote control
- Bar light
- Work lights
- Switch panel
- Magnetic tow lights
- J-hook chains
- V-chain
- Trailer ball plate
- Trailer hitch for AutoGrip™ II
- L.E.D. lights

Note: Some option selections may not be compatible in certain configurations.

### 2.7 CHASSIS RECOMMENDATIONS

- Minimum GVWR - 15,000 lbs.
- Maximum GVWR - 25,500 lbs.
- Accessible PTO opening
- Maximum frame height - 37 inches
- Minimum CA for wheel lift - 120 inches

| CARRIER LENGTH | USABLE CAB-TO-AXLE        |                            | MINIMUM RBM<br>EACH FRAME RAIL |
|----------------|---------------------------|----------------------------|--------------------------------|
|                | INBOARD<br>TILT CYLINDERS | OUTBOARD<br>TILT CYLINDERS |                                |
| 19             |                           | 120                        | 500,000 in. • lbs.             |
| 19.5           | 120                       | 120 or 126                 | 500,000 in. • lbs.             |
| 21             | 138                       | 138                        | 600,000 in. • lbs.             |
| 21.5           | 144                       | 144                        | 600,000 in. • lbs.             |
| 22             | 150                       | 150                        | 600,000 in. • lbs.             |

# Section II - SPECIFICATIONS

## 2.8 SPECIFICATIONS

|                         |                                |
|-------------------------|--------------------------------|
| Aluminum Body Width     | 96-3/4 O.D. x 92 I.D.          |
| Steel Body Width        | 96 O.D. x 92 I.D.              |
| Body Extension          | 120 inches                     |
| Control Valve           | Sectional, 20 GPM, 2400 PSI    |
| Oil Reservoir           | 12 gallons                     |
| Oil Filter              | 250 PSI, 25 Microns            |
| Pump                    | 18 GPM                         |
| Body Rating*            | 10,000 lbs. evenly distributed |
| Wheel-Lift Lift Rating* | 3,000 lbs. extended            |
| Wheel-Lift Tow Rating*  | 10,000 lbs.                    |

\* Load ratings are based on structural factors - not chassis capability or capacity.

Miller reserves the right to improve or upgrade its products without obligation to modify previously manufactured units.

## Section II - SPECIFICATIONS

### HYDRAULIC COMPONENTS

#### HYDRAULIC PUMP

The pump used on your Miller unit is a gear type pump. Pump sizes may vary, depending upon the engine, transmission, and exhaust configuration of the chassis. The pump should be operated at between 700 and 1200 RPM. The pump flow capacity is rated at 1200 RPM. Miller carriers are equipped with either 18 GPM or 24 GPM pumps as follows.

| CARRIER MODEL | 18 GPM | 24 GPM   | TANK SIZE (Gal.) | SYSTEM PRESSURE |
|---------------|--------|----------|------------------|-----------------|
| Series 10     | STD    | N/A      | 12, 13 or 14     | 2400            |
| Series 12     | STD    | N/A      | 12 or 14         | 2400            |
| Series 16     | STD    | N/A      | 12 or 14         | 2400            |
| Series 20     | STD    | Optional | 14 or 24         | 2400            |
| Series 30     | N/A    | STD      | 24               | 2400            |
| Series 40     | N/A    | STD      | 24               | 2400            |

Carriers equipped with an 18 GPM pump are supplied with 3/4 inch pressure and return lines along with a "low pressure" in-tank filter with a flow capacity of 30 GPM.

Carriers equipped with a 24 GPM pump must be equipped with 3/4 inch pressure and 1 inch return lines along with a "low pressure" in-tank filter with a flow capacity of at least 30 GPM. 24 GPM pumps also require the 24 gallon oil tank.

#### HYDRAULIC CYLINDERS

All cylinders are of the double-acting type. Tilt and lift cylinders are equipped with a counter balance valve. It prevents the cylinders from creeping or moving at any time unless activated by the hydraulic control valve. It also prevents cavitation and chattering in the cylinders.

#### CONTROL VALVE

An open center 4-way sectional control valve is used to govern the hydraulic system. Its flow capacity through each section is 20 GPM. Its bypass pressure setting is 2400 PSI with a tamper proof relief cartridge. Any or all work sections can be equipped with electric solenoids for remote operation. Carriers requiring more pressure are shimmed to a higher pressure by Miller Industries.

#### LOAD HOLDING VALVES

Load holding counter balance valves are used on the body tilt, underlift lift, hydraulic stabilizer and AutoGrip wheel lift arm functions to provide smooth operation under load as well as load holding capabilities when the hydraulic system is not active. Units equipped with the AutoGrip wheel lift system employ a flow divider to keep the wheel arms synchronized while closing.

## **Section II - SPECIFICATIONS**

### **HYDRAULIC COMPONENTS**

#### **RESERVOIR**

The hydraulic oil tank has a reserve capacity of either 12, 14 or 24 gallons. The 24 gallon tank is used in combination with 20,000 lb. and 30,000 lb. winches that generate a lot of heat. It is also used in combination with the 24 GPM pump. Hydraulic oil in the tank must be changed when it becomes dirty or contaminated. Under extreme cold weather conditions, moisture may accumulate in the tank and may be drained off by removing the bottom plug.

#### **FILTER**

The carriers are equipped with an in-tank 30 GPM 25 micron filter. The filter element should be changed every 6 months.

## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.1 POWER TAKE-OFF

- (a) This control is mounted inside the cab. To operate the PTO, put the transmission in neutral, engage the emergency brake, pull out the PTO control, and apply the emergency brake securely.
- (b) Engaging this control transmits engine power through the PTO which turns a hydraulic pump by means of a connecting drive shaft. The proper engine speed to operate the unit is from 700-1200 RPM.



### CAUTION

**NEVER** travel with the PTO engaged. Refer to the PTO identification label located near the driver's seat inside the cab for more information.



### WARNING

Make sure transmission is in neutral or park with the parking brake applied before engaging PTO to operate carrier controls. **Failure to do so could cause serious injury to yourself or others.**

Section III - OPERATING INSTRUCTIONS

CARRIER

- 3.2      The controls are mounted directly behind the rear wheels on both sides of the carrier. Each function of your Carrier can be controlled from either side of the dual control station.



3.3      BODY BACK CONTROL

Lifting the "Body Back" control slides the body back on the subframe. When operating this unit, this procedure must be performed **first** after engaging the PTO. Slide the body back 12 inches to clear the mechanical body lock located directly behind the cab. The body is capable of traveling up to 9.5 feet along the subframe. Pushing down on the control will move the body forward toward the cab. See Figure 3.1.

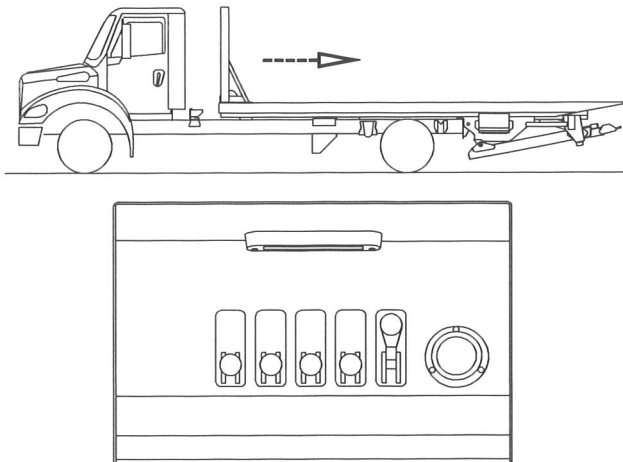


Figure 3.1

## Section III - OPERATING INSTRUCTIONS

### CARRIERS

#### 3.4 BODY TILT CONTROL

- (a) Lifting the "Body Tilt" control raises the front of the carrier up directly off the chassis and positions the unit on an incline. It may be adjusted to any position within its extremities. This part of the hydraulic system is equipped with a hydraulic counter balance valve as a safety feature. It locks the tilt cylinders in position when the hydraulic system is disengaged. See Figure 3.2.
- (b) Pushing down on the control lowers the carrier to its seated position.

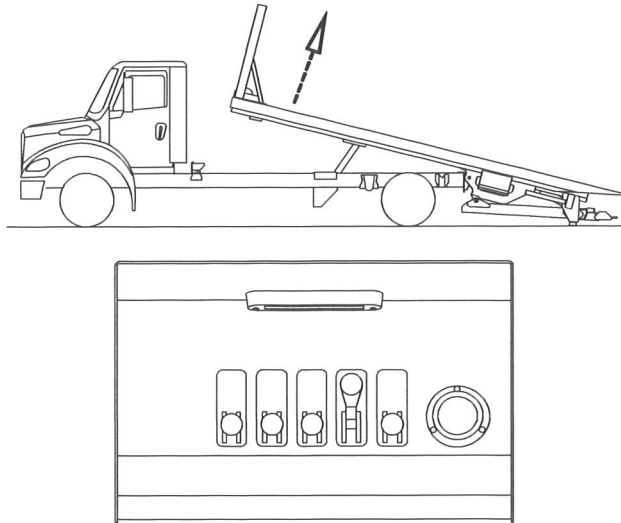


Figure 3.2



## WARNING

**DO NOT** tilt the carrier unless the body is forward as shown especially when loaded. Tilting the carrier with the body extended is dangerous and can cause truck frame and subframe damage. Sliding the bed while horizontal transfers thousands of pounds behind the rear axle which applies unnecessary extra stress to the slide-rail slide-pads and slideback cylinder seals. The bed should be slid forward and rearward while the carrier is inclined with the subframe stabilizer on the ground.

**DO NOT** tilt the carrier unless the body is slid back 12 inches to clear mechanical body lock.



## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.5 WINCH CONTROL

The winch has two controls. One control is for free spooling the cable on the winch drum. The other controls the direction that the cable travels. The winch is capable of holding its position when hydraulic power is not being activated. The hydraulic winch is to be used only for loading and unloading the carrier bed. Its design does not allow it to be used in the type of recovery work that is usually performed by wreckers.

The following practices should be maintained when using the winch cable:

- **DO NOT** use winch for side pulling. Always make sure carrier is in line with the vehicle or object being loaded.
- **DO NOT** attach the cable hook to the object being loaded. Attach the cable hook to a hook-up chain or sling suitable for the object being loaded. This enables the cable to pull from the load center and help even spooling of the cable on the winch drum.
- **DO NOT** wrap the cable around an object as this tends to fray or kink the cable.
- Maintain an even cable wrap on the winch drum and also observe that the cable does not climb up the side of the winch drum when in use.
- Continually observe the cable condition for kinks, frays, or a build-up of rust. Should any of these conditions be noticed, replace the cable assembly.
- **DO NOT** exceed the cable working load limit of 3,500 lbs. for a 3/8 cable.
- A minimum of 5 wraps of cable around the drum barrel is necessary to hold the load and prevent damage to the cable tensioner(s).



## WARNING

When using the free spool control, it is important to make sure that the drum clutch is reengaged and fully seated before winching. If not fully engaged, it may pop out and allow winch to free spool allowing load to reverse and possibly cause serious injury. Jog the winch hydraulically between forward and reverse if necessary to fully engage the clutch.

## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.5 WINCH CONTROL (cont'd)

To reel the cable out, lift up on the control handle. To reel the cable in, push down on the control handle. See Figure 3.3.

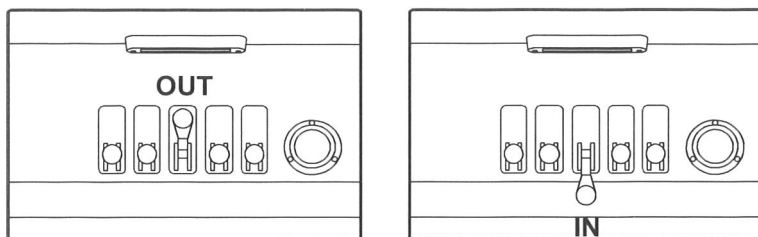


Figure 3.3

#### 3.6 LOAD PLACEMENT

Loads on the carrier bed should be placed in such a manner that the axle weights do not exceed the axle ratings (GAWR) specified by the chassis manufacturer. The location of loads placed on the carrier bed can affect the truck's driving and handling characteristics. An acceptable weight distribution can be obtained by observing the following rules:

- Place the cargo on the carrier bed in such a manner that the weight is divided equally on both sides.
- When carrying a vehicle or other singularly heavy object, place it forward of the carrier's rear wheels and as close to the cab as possible.
- When loading a variety of objects, place the heaviest items forward on the carrier bed.



### CAUTION

**Never attempt to use wheel lift or tow bar for towing without sufficient load placed on carrier bed as far forward as possible.**

#### 3.7 LOAD BINDING

Loads must be bound with tie-down chains, both front and rear, for transporting. The winch cable is not intended for load tie down, but may be used as a means of secondary support. Chain locks are supplied in the front and rear of the body for chain tie down. Tie-down hooks and chain locks are also available for side load tie down. The front chain locks together with a chain may be used as a cable anchor when using a snatch block for loads exceeding the winch cable rating. See Figure 3.10 and 3.14.

## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.8 UNDERLIFT CONTROL - IN/OUT

Lifting the "Underlift In-Out" control extends the underlift. The underlift must be fully extended when turning tight corners with a vehicle being towed. A vehicle may be towed with the underlift partially retracted for better control and weight distribution when tight turning is not necessary. See Figure 3.4.

When the underlift is extended, caution must be exercised when sliding the body back. Sliding the body back more than 4 feet may put the slideback cylinder in contact with the wheel lift, damaging the cylinder shaft or the underlift.

**MILLER IND. WILL NOT ACCEPT LIABILITY FOR DAMAGE TO THE UNIT RESULTING FROM THIS TYPE OF IMPROPER OPERATION.**

While hooking up a vehicle for tow on carriers with a fixed position hitch, there is no reason to slide the body back more than the distance needed to clear the body lock. This will enable the towed vehicle to be adjusted to the desired tow height.

Pushing down on the control retracts the underlift to its seated position.

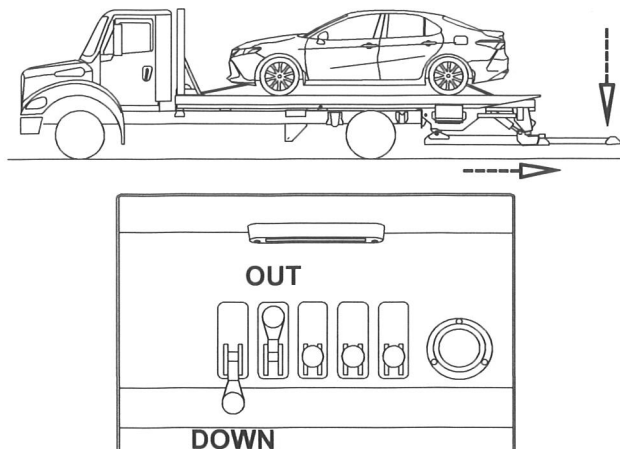


Figure 3.4

## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.9 UNDERLIFT CONTROL - UP/DOWN

Lifting the "Underlift Up-Down" control raises and lowers the underlift. Carriers equipped with this feature can hydraulically adjust the tow height of a vehicle without tilting the whole carrier. See Figure 3.5.

Pushing down on this control will lower the underlift toward the ground.

This part of the hydraulic system is equipped with a hydraulic load holding valve as a safety feature. It locks the lift cylinders in position when the hydraulic system is disengaged.

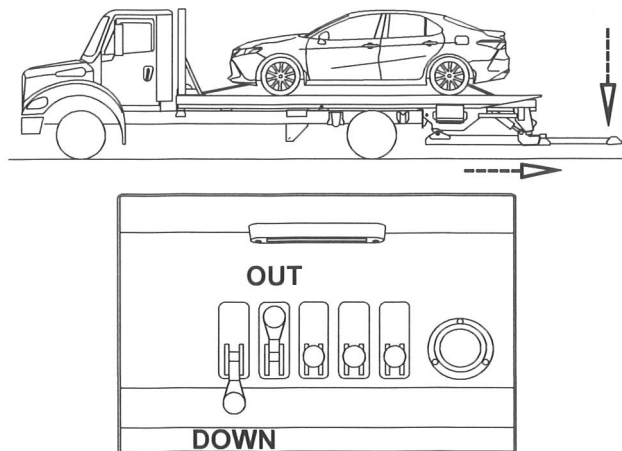


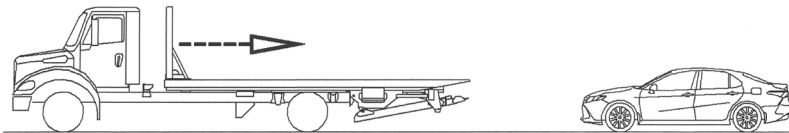
Figure 3.5

## Section III - OPERATING INSTRUCTIONS

### CARRIER

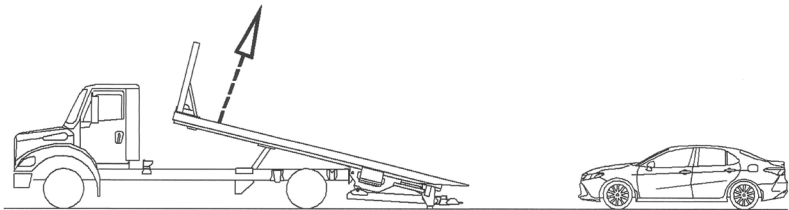
#### 3.10 BODY LOADING

- (a) Engage the PTO.
- (b) Apply the emergency brake securely.
- (c) Slide the body rearward 12 inches to clear the body lock. See Figure 3.6



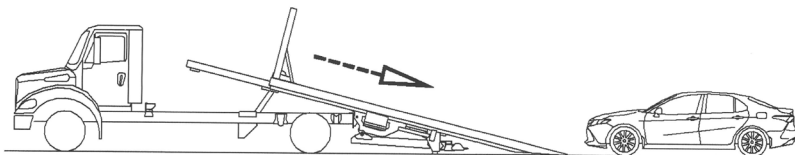
**Figure 3.6**

- (d) Tilt the carrier until the rear stabilizer contacts the ground. See Figure 3.7.



**Figure 3.7**

- (e) Slide the body rearward until it contacts the ground. See Figure 3.8.



**Figure 3.8**

## Section III - OPERATING INSTRUCTIONS CARRIER

### 3.10 BODY LOADING (cont'd)

- (f) Attach a V-chain to the vehicle being loaded. Then attach the winch cable to the V-chain. **DO NOT** wrap the cable on the vehicle as this will damage the cable and may cause injury. See Figure 3.9.

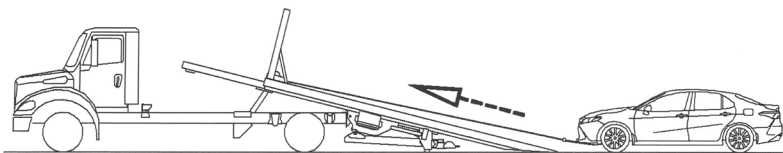
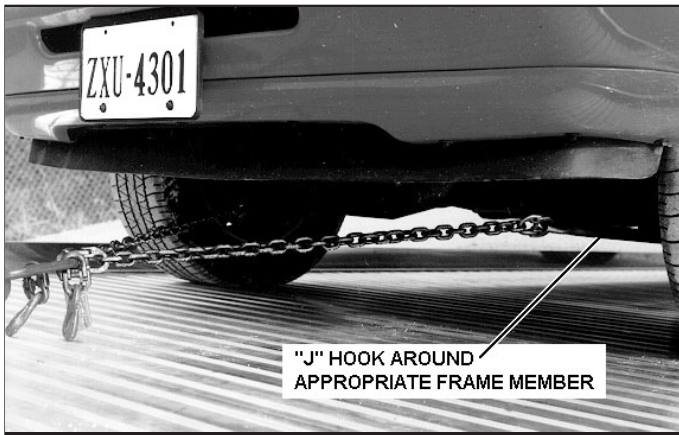


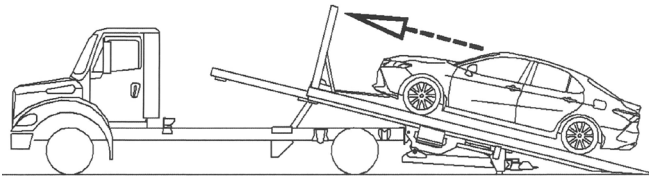
Figure 3.9

## Section III - OPERATING INSTRUCTIONS

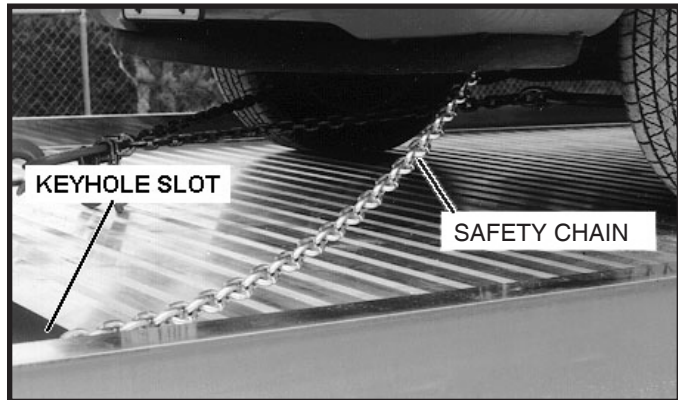
### CARRIER

#### 3.10 BODY LOADING (cont'd)

- (g) Clear all people from behind the vehicle being loaded. Winch the vehicle up the body.



Attach a front safety chain from the vehicle to the body as a precautionary measure. Apply the loaded vehicle's emergency brake to prevent forward and rearward movement. See Figure 3.10.



**Figure 3.10**

- (h) The safety chain is attached to the front of the body at one end and is equipped with a T-hook and a 5/16 grab hook at the other end.

## Section III - OPERATING INSTRUCTIONS CARRIER

### 3.10 BODY LOADING (cont'd)

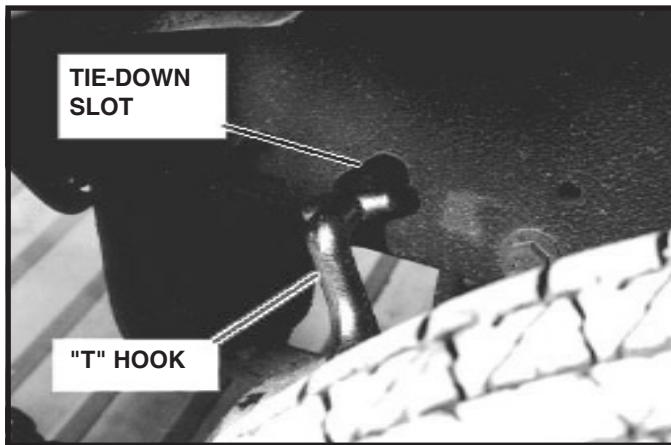


Figure 3.11

- (i) Slide the body forward within 12 inches of the cab to transfer the load weight forward of the rear wheels on the carrier chassis. **DO NOT** tilt the carrier with body extended as this can cause subframe and truck frame damage. See Figure 3.12.

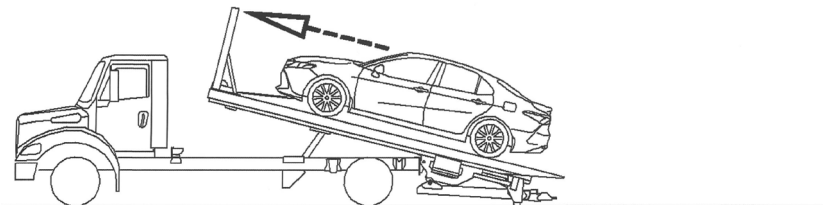


Figure 3.12



## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.10 BODY LOADING (cont'd)

- (j) Level the body. See Figure 3.13.

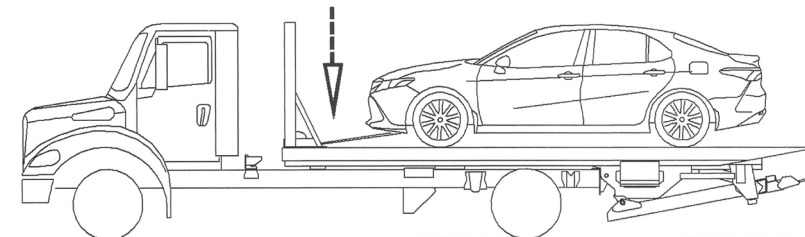


Figure 3.13



- (k) Attach the rear tie-down chains from the vehicle to the chain locks in the body. Reel the winch in to apply tension to the rear chains. Re-adjust the front safety chain to remove excess slack. See Figure 3.14.

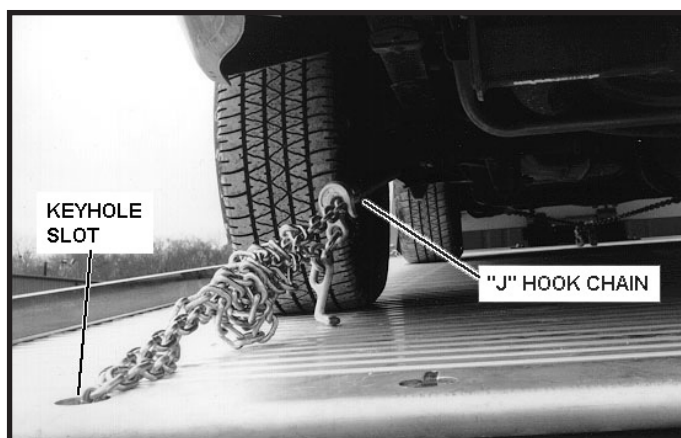


Figure 3.14

## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.10 BODY LOADING (cont'd)

- (l) Slide body completely forward into the body lock. Disengage the PTO. See Figure 3.15.

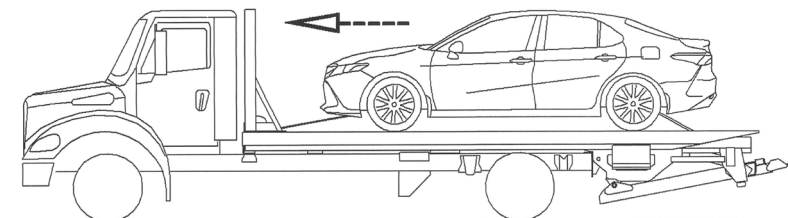


Figure 3.15



## WARNING

Keep people clear of unit when operating. **Failure to do so could result in serious injuries.**

Keep people clear from back of carrier when loading a vehicle on the bed. **Failure to do so could result in serious injuries.**

Make sure transmission is in neutral or park with the parking brake applied before engaging PTO to operate carrier controls. **Failure to do so could cause serious injury to yourself or others.**

When towing or hauling a vehicle, safety chains must be used. See manual for appropriate way to hook. **Failure to do so could result in serious injuries to driver or others.**

When using controls to load vehicle, be aware of oncoming traffic to avoid being struck. This is the reason your carrier unit has controls on each side of the body.

## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.11 LOADING VEHICLE ON GEN 2 RIGHT APPROACH CARRIERS

- (a) Line Carrier up to within a distance of 12 to 15 ft. in front of the disabled vehicle from the rear of the truck.
- (b) Reduce engine to an idle and apply parking brake. Depress clutch, place transmission in neutral and engage PTO.
- (c) Adjust the engine speed (1,000 to 1,200 RPM recommended) with the Electronic Throttle Control, or with electronic cruise control in cab of truck.
- (d) Lift the BED TRAVEL lever and extend the carrier bed enough to clear the bed locks.
- (e) Lift the BED TILT lever and tilt the carrier until the subframe stabilizer contacts the ground.
- (f) Lift the bed travel lever and slide the bed rearward. The bed will hinge as the approach rollers contact the ground. Continue extending the bed until the approach forms a 6.5° angle with the ground.



## WARNING

**KEEP FINGERS, HANDS AND OTHER EXTREMITIES CLEAR OF  
AREAS THAT FOLD, INCLUDING SIDE RAILS AND ACROSS FLOOR.  
SERIOUS INJURY COULD RESULT.**

- (g) Attach the hook-up chains to the disabled vehicle.
- (h) Disengage the winch cable drum control and pull the cable out by hand.

## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.11 LOADING VEHICLE ON GEN 2 RIGHT APPROACH CARRIERS (cont'd)

- (i) Attach winch cable to the hook-up chains and re-engage the winch cable drum control.
- (j) Insert removable cable guide into floor slot in the bed and rotate 90° to lock. Thread the cable through the hooks.

#### NOTE

**ALWAYS USE THE CABLE GUIDE PROVIDED WHEN LOADING LOW SPOILER VEHICLES, SO WINCH CABLE IS HELD LOW TO THE DECK AND AWAY FROM THE VEHICLES' SPOILER OR AIR DAMS.**

- (k) Place the disabled vehicle's transmission in neutral.
- (l) Depress the WINCH lever slowly until tension is placed on the winch cable.
- (m) Check to make sure that all hook-ups have been correctly made and are secure.
- (n) Depress the WINCH lever until the vehicles' front tires are on the folded deck. Engage parking brake or place chock blocks behind the disabled vehicles rear tires.
- (o) Release tension on winch cable by raising the WINCH lever and remove cable guide.
- (p) Depress the BED TILT lever to straighten the bed and continue loading vehicle until front wheels are on the front section of the deck.



## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.11 LOADING VEHICLE ON GEN 2 RIGHT APPROACH CARRIERS (cont'd)

- (q) On vehicles with low rear clearance due to low rear spoilers, exhaust pipes or low bumpers, it may be necessary to angle the rear section a second time until the rear tires are fully on the carrier.



- (r) Depress the BED TILT lever to straighten the bed then continue to depress the WINCH lever until the vehicle is as far forward on the carrier bed as possible.



#### **WARNING**

**DO NOT ATTEMPT TO LEVEL A LOADED CARRIER BED WHEN IT IS IN THE REARWARD, TILTED POSITION. SLIDE THE BED FORWARD ONLY AFTER IT HAS BEEN MADE STRAIGHT KEEPING CONTACT WITH THE GROUND WITH THE REAR END OF BODY. LEVEL THE BED ONLY AFTER IT HAS BEEN SLID SUBSTANTIALLY FORWARD WITH SAFETY CHAINS SECURED. DO NOT STAND BEHIND CARRIER UNTIL FRONT SAFETY CHAINS HAVE BEEN SECURED.**

- (s) Attach the front tie-down chains to an appropriate member at the front of the vehicle and secure the other end in the front keyhole shaped slots provided on the carrier bed.

## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.11 LOADING VEHICLE ON GEN 2 RIGHT APPROACH CARRIERS (cont'd)

- (t) Attach the front tie-down chains to an appropriate member at the front of the vehicle and secure the other end in the front keyhole shaped slots provided on the carrier bed.



#### **WARNING**

**ALWAYS ATTACH FRONT CHAINS BEFORE ATTACHING OR REMOVING REAR CHAINS, OR WORKING AROUND A LOAD SUPPORTED BY THE WINCH.**



#### **WARNING**

**FOR LOADS OVER 3000 LBS., WHEN BED IS REARWARD AND TILTED AND AFTER REAR TIE-DOWN CHAINS HAVE BEEN SECURED, STABILIZE THE CARRIER BY LOWERING THE WHEEL LIFT OR STABILIZER TO THE GROUND, THEREBY REDUCING STRAIN ON TILT CYLINDERS.**



#### **WARNING**

**DO NOT ATTACH CHAINS TO DRIVE LINE COMPONENTS OF FRONT DRIVE VEHICLES. BE SURE TO ATTACH TIE-DOWN CHAINS TO VEHICLE IN APPROPRIATE FRAME MEMBERS, AND SECURE CHAINS IN KEYHOLE SLOTS AT FRONT OF THE CARRIER BED. SEE OWNERS MANUAL ON VEHICLE BEING TOWED FOR SPECIFIC TIE DOWN POINTS RECOMMENDED BY THE MANUFACTURER.**

- (u) When using a tie-down chain equipped with a "T" hook, secure the vehicle being transported.
- (v) Depress the BED TRAVEL knob, sliding the carrier bed forward to within 12" of the cab.
- (w) Attach tie-down chains around the rear axle or other appropriate frame member on the disabled vehicle. Secure the chains in the keyhole shaped slots provided on the carrier bed. Stow any excess chain.
- (x) Lower the carrier bed to its normal position by depressing the BED TILT lever.
- (y) Using the BED TRAVEL lever, slide the carrier bed forward until it locks.

## Section III - OPERATING INSTRUCTIONS

### CARRIER

#### 3.11 LOADING VEHICLE ON GEN 2 RIGHT APPROACH CARRIERS (cont'd)

##### NOTE

GEN 2 RIGHT APPROACH CARRIERS ARE EQUIPPED WITH FRONT AND REAR BED LOCKS. THE REAR BED LOCKS ARE BOLTED TO THE SUBFRAME BEHIND THE CONTROL STATION FOR SECURING THE PIVOTING PORTION OF THE BED. THE FRONT AND REAR BED LOCKS ENGAGE AND DISENGAGE SIMULTANEOUSLY WHEN SLIDING THE BED FORWARD AND REARWARD.



- (z) Depress the WINCH lever to take any remaining slack out of the rear tie-down chains.
- (aa) Adjust front tie-down chains, if necessary, and stow any excess chain.
- (bb) Attach chain binder to tie-down chains at front of vehicle and tighten until vehicle is secure.



### WARNING

**BEFORE TRANSPORTING VEHICLE, ATTACH CHAIN BINDERS TO FRONT TIE-DOWN CHAINS.**

**IF REMOVABLE RAILS ARE DETACHED FROM BED, THEY MUST BE FIRMLY SECURED BEFORE MOVING VEHICLE.**

## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT

#### 3A.1 RELEASABLE L-ARM WHEEL LIFT HOOK-UP/DROP-IN

- (a) Release the cam lock pin and extend the wheel grid until the L-arm receivers are beyond the outer side wall of the tires on the vehicle to be towed.
- (b) Lower and extend the wheel lift until the wheel grids are positioned against the ground and the towed vehicle's tires.
- (c) Retrieve the L-arms from the storage brackets. Install the L-arms into the wheel grids with the wheel retainer against the back of the tire. See Figure 3A.5.



Figure 3A.5



## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT

#### 3A.1 RELEASABLE L-ARM WHEEL LIFT HOOK-UP/DROP-IN (cont'd)

- (d) Insert the T-pins into the wheel grid to lock the L-arm in place. See Figure 3A.6.



Figure 3A.6



Make sure the T-pin is fully engaged through both receiver plates in the wheel grid. Partially inserting the T-pin will cause damage to the wheel grid receiver and T-pin when the vehicle is lifted or towed.

## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT

#### 3A.1 RELEASABLE L-ARM WHEEL LIFT HOOKUP/DROP-IN (cont'd)

- (e) Raise the wheel lift until the towed vehicle is at the desired height.  
**CAUTION:** The towed vehicles tires must be approximately 18 inches above the ground so that the L-arms will not collide with the ground when the carrier is driven up an abrupt incline.
- (f) Retract the wheel lift to the desired position allowing sufficient distance between the back of the carrier and towed vehicle for turning.

### NOTE

When towing from the rear axle, put the vehicle in gear and engage the parking brake. When towing from the front drive axle, put the vehicle in gear and disengage the parking brake.

- (g) Attach the wheel safety straps as shown. Place the D-ring over the wheel grid T-hook and position the strap around the tire. Insert the ratchet hook into the hole at the back of the L-arm and ratchet the strap until it is tight. See Figure 3A.7.



Figure 3A.7

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.2 VEHICLE HOOK-UP / SLIDE-IN



#### CAUTION

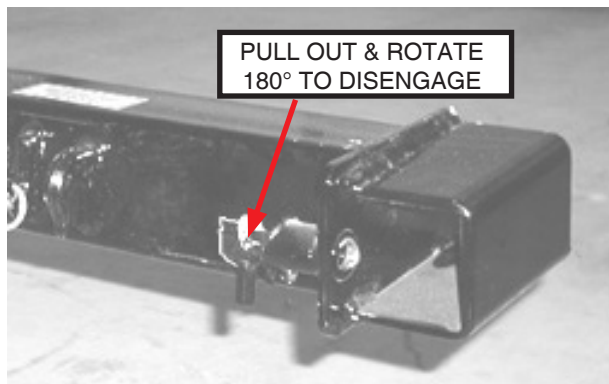
**MAKE CERTAIN THE PARKING BRAKE IS ENGAGED AND TRANSMISSION IS IN GEAR (PARK) ON DISABLED VEHICLE BEFORE ENGAGING THE WHEEL LIFT.**

- (a) Re-engage PTO and increase RPM's, then lower wheel lift to the ground and extend boom until crosstubes are firmly against tires of vehicle to be towed. See Figure 3A.8



**Figure 3A.8**

- (b) Retrieve tire restraints from storage brackets.
- (c) Disengage the tire restraint camlock by rotating 180°.



**Figure 3A.9**

## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT

#### 3A.2 VEHICLE HOOK-UP / SLIDE-IN

- (d) Insert tire restraint into crosstube and slide in until it is firmly against back of tire. See Figure 3A.10



Figure 3A.10

- (e) Rotate cam lock and adjust tire restraint until plunger pin is locked in the appropriate hole in tire restraint.



#### WARNING

**MAKE CERTAIN THE TIRE RESTRAINTS ARE LOCKED INTO POSITION BY TUGGING SHARPLY ON TIRE RESTRAINTS AFTER CAMLOCK PIN HAS BEEN RELEASED. THIS MUST BE DONE FOR EVERY USE!**



#### CAUTION

**WITH TIRE RESTRAINTS INSTALLED, BE CERTAIN THAT IT WILL CAUSE NO DAMAGE TO THE VEHICLE TO BE TOWED WHEN WHEEL LIFT IS IN ITS RAISED POSITION. TO AVOID ANY DAMAGE FROM TIRE RESTRAINTS, ADJUST CROSSTUBES TO DESIRED POSITION.**



#### CAUTION

**IT MAY BE REQUIRED ON SOME VEHICLES TO REMOVE THE HUB CAPS BEFORE MOUNTING TO THE WHEEL LIFT.**

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.2 VEHICLE HOOK-UP / SLIDE-IN

- (f) Repeat procedures (c) through (e) on opposite side of vehicle.
- (g) Using the Wheel Lift "UP-DOWN" Control, raise vehicle to desired height.
- (h) Release safety strap ratchet by releasing lock on ratchet lock handle. See Figure 3A.11



**Figure 3A.11**

- (i) With ratchet lock released, pull handle all the way up and pull out desired length of safety strap.
- (j) Put safety strap over the top of tire as shown in Figure 3A.12. Make certain that the "D" ring is pointed towards the carrier.



**Figure 3A.12**

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.2 VEHICLE HOOK-UP / SLIDE-IN

- (k) Release ratchet lock and ratchet safety strap around tire securely. Figure 3A.13 illustrates correct safety strap application.



Figure 3A.13



### WARNING

**SAFETY STRAP MUST BE FULLY ENGAGED WITH THE RATCHET. THE RATCHET LOCK MUST FULLY RETURN TO A POSITION BETWEEN THE LATCH HANDLE AND THE PLATE BEFORE TOWING.**

- (l) Repeat safety strap installation on opposite side of vehicle



### WARNING

**WHEN TOWING FROM REAR AXLES, SECURE STEERING WHEEL OF VEHICLE. DO NOT RELY ON THE STEERING WHEEL LOCKING DEVICE.**



### WARNING

**USE SAFETY CHAINS ON ALL TOWING AND LIFTING APPLICATIONS.**

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.2 VEHICLE HOOK-UP / SLIDE-IN

- (m) Retract wheel lift boom, making certain there is enough clearance between disabled vehicle and the tailgate of the carrier for sharp turns.
- (n) Using the Wheel Lift "UP-DOWN" Control, raise vehicle to desired towing height and reinstall the safety pin.

### NOTE

**SAFETY STRAP MUST BE FULLY ENGAGED WITH THE RATCHET. THE RATCHET LOCK MUST FULLY RETURN TO A POSITION BETWEEN THE LATCH HANDLE AND THE PLATE BEFORE TOWING.**

### NOTE

**WHEN TOWING FROM REAR DRIVE AXLES, PUT VEHICLE IN GEAR AND ENGAGE PARKING BRAKE. WHEN TOWING FROM FRONT DRIVE AXLES, PUT VEHICLE IN GEAR AND DISENGAGE PARKING BRAKE.**

### 3A.3 VEHICLE HOOK-UP / 3-WAY PIVOT

- (a) Re-engage PTO and increase RPM's, then lower wheel lift to the ground and extend boom until crosstubes are firmly against tires of disabled vehicle.
- (b) Leave tire restraint plunger in position as shown in Figure 3A.14.



**Figure 3A.14**



## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.3 VEHICLE HOOK-UP / 3-WAY PIVOT



**Figure 3A.15**

- (c) Slide tire restraint into receiver at an angle, as shown in Figure 3A.15. When tire restraint is against back of tire, lower rear of tire restraint until alignment pin in bottom of receiver engages hole in bottom of tire restraint. Ensure that plunger pin fully engages in tire restraint arm.



#### **CAUTION**

**TIRE RESTRAINT PLUNGER PIN MUST BE IN TIRE RESTRAINT ARM.**



#### **CAUTION**

**WITH TIRE RESTRAINTS INSTALLED, BE CERTAIN THAT IT WILL CAUSE NO DAMAGE TO THE VEHICLE TO BE TOWED WHEN WHEEL LIFT IS IN ITS RAISED POSITION. TO AVOID ANY DAMAGE FROM TIRE RESTRAINTS, ADJUST CROSSTUBES TO DESIRED POSITION.**



#### **CAUTION**

**IT MAY BE REQUIRED ON SOME VEHICLES TO REMOVE THE HUB CAPS BEFORE MOUNTING TO THE WHEEL LIFT.**



## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.3 VEHICLE HOOK-UP / 3-WAY PIVOT

- (d) Repeat procedures (c) through (d) on opposite side of vehicle.
- (e) Using the Wheel Lift "UP-DOWN" Control, raise vehicle to desired height.
- (f) Lay the basket strap across the tire, with the top of the tire enclosed in the basket section of the strap. Make sure the strap is flat and not twisted. (NOTE: Two T-hooks are provided on the basket strap to accommodate tires of various sizes.)

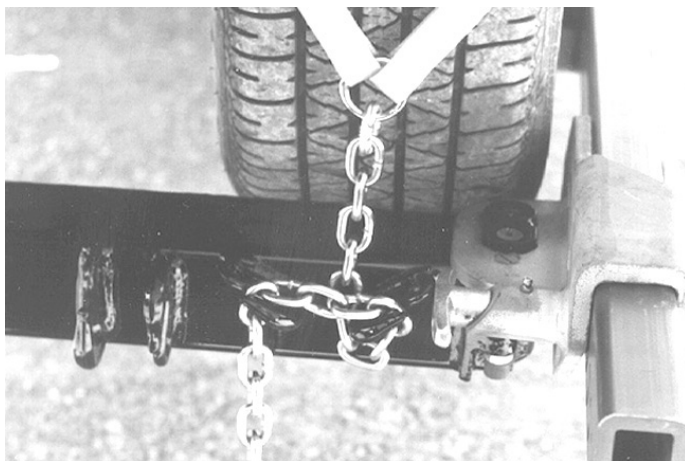


**Figure 3A.16**

- (g) The curve of the T-hook should follow the curvature of the tire. Turn the T-hook 90°, insert it into the slot in the tire restraint, then rotate to horizontal, making sure the strap is not twisted.
- (h) Pull the basket strap tight across the tire, sealing the T-hook firmly in the top of its slot.
- (i) With the strap pulled tight, pass the chain between the two hooks welded to the front of the crosstube at an angle. See Figure 3A.17
- (j) Wrap the chain below one hook, then outside and back over the top.
- (k) Seat the chain firmly into the hook, then pass across the top of the second hook, also seating the chain. See Figure 3A.17

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.3 VEHICLE HOOK-UP / 3-WAY PIVOT



**Figure 3A.17**

- (l) Secure the loose end of the chain by wrapping it around the vertical part of the chain; the chain must not be free to drag.
- (m) Note that either hook may be wrapped first (the chain may be wrapped clock-wise or counter-clockwise), but the chain must pass between the two hooks and then around from below for the Safety Strap to function properly.
- (n) Repeat procedures (g) through (m) on opposite side of vehicle.



### **WARNING**

**USE SAFETY CHAINS ON ALL TOWING AND LIFTING APPLICATIONS.**

### 3A.4 VEHICLE HOOK-UPS / SCOOPS

- (a) Begin with the WHEEL LIFT fully retracted. Use the WHEEL LIFT "UP / DOWN" CONTROL to adjust the height of the crossbar until it is 1 or 2 inches above the ground. Ensure that crossbar is low enough to clear the underside of the vehicle to be towed.
- (b) Adjust the wheel grids on the crossbar to match the track width of the vehicle to be towed. Make sure the locking screws for the grids are tight. See Figure 3A.18

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.4 VEHICLE HOOK-UPS / SCOOPS



**Figure 3A.18**

- (c) Retract the wheel stop pins. Remove the safety pin from the receivers of the wheel grids. Swing the receivers outwards. See Figure 3A.19.



**Figure 3A.19**

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.4 VEHICLE HOOK-UPS / SCOOPS

- (d) Extend and lower the WHEEL LIFT until the wheel grids on the crossbar touch the ground and both wheels.
- (e) Remove the two wheel retainers from their storage position and lay one on the ground next to each wheel.
- (f) At each wheel, insert the wheel retainer into its receiver. Leave about 1/2 inch space between the wheel and retainer when possible to allow the disabled vehicle's tire to sit lower in the wheel retainer mechanism. See Figure 3A.20.



**Figure 3A.20**

- (g) Swing the retainer into position so that the tire grip plate fits closely behind the tire. Make sure one of the holes in the bottom of the arm of the retainer engages the pin in the receiver, thereby locking the arm in place. See Figure 3A.21.

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.4 VEHICLE HOOK-UPS / SCOOPS



**Figure 3A.21**

- (h) At each wheel, insert the safety pin in a hole in the top of the arm, close to the receiver. The safety pin ensures that the wheel retainer remains locked in position in the event of a panic stop or if the wheel should drag on the ground. See Figure 3A.22.



**Figure 3A.22**



## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.4 VEHICLE HOOK-UPS / SCOOPS

#### NOTE

**ALWAYS TAKE EXTREME CARE THAT THE WHEELS OF THE TOWED VEHICLE DO NOT DRAG ON THE GROUND WHEN DRIVING OVER UNLEVEL SURFACES. IF YOU SUSPECT THE WHEELS MAY HAVE TOUCHED THE GROUND, GET OUT AND INSPECT THE HOOK-UP BEFORE PROCEEDING.**

- (i) At each wheel, position the stop pin so it is directly in front of the tire. Slide the stop pin forward and rotate it to lock. Refer to Figure 3A.22. In the case of a broken tie rod or flat tire, the extra safety pin should be used to lock horizontal movement of the wheel retainer receiver. See Figure 3A.23



Figure 3A.23

#### NOTE

**THE STOP PIN, LOCATED IN FRONT OF THE WHEEL, PROVIDES ADDITIONAL RESTRAINT AND PREVENTS THE WHEEL FROM ROLLING FORWARD IN THE EVENT OF A PANIC STOP. ALWAYS MAKE SURE THE STOP PIN IS LOCKED IN POSITION.**

- (j) On the towed vehicle, release the parking brake and shift the transmission into NEUTRAL. Do this even if you are raising the drive wheels.

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.4 VEHICLE HOOK-UPS / SCOOPS



**FAILURE TO PERFORM THIS STEP BEFORE RAISING THE VEHICLE  
MAY RESULT IN DAMAGE TO THE VEHICLE'S TRANSMISSION OR  
BRAKES.**

- (k) Raise the WHEEL LIFT to the desired towing height and reinstall the Safety Lock Pin.

### NOTE

**THE VEHICLE SHOULD BE POSITIONED AS FAR FORWARD  
AS POSSIBLE WHILE MAINTAINING CLEARANCE FOR TURNS.  
THIS KEEPS MORE WEIGHT ON THE FRONT WHEELS OF THE  
CARRIER FOR SAFER STEERING.**

- (l) Raise the wheel lift as needed to clear the undercarriage of the disabled vehicle, but keep the wheel lift as close to horizontal as possible. See Figure 3A.24.



Figure 3A.24

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.4 VEHICLE HOOK-UP / SCOOPS

- (m) Check the trailing end of the vehicle for adequate ground clearance. Remove wheel chocks if used.
- (n) Make sure the towed vehicle's wheels that remain on the ground are free to roll. Make sure they are not locked by the transmission or parking brakes.



#### CAUTION

**IF YOU ATTEMPT TO START THE TOW WHILE THE WHEELS ON THE GROUND ARE LOCKED, YOU MAY DAMAGE THE WHEEL LIFT AND THE TOWED VEHICLE.**



#### WARNING

**USE SAFETY CHAINS ON ALL TOWING AND LIFTING APPLICATIONS.**



## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

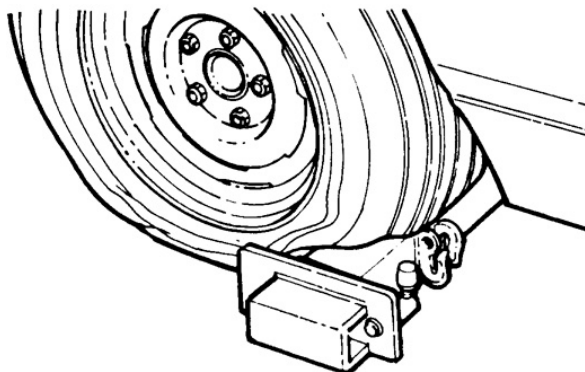
### 3A.5 HOOK-UP FOR VEHICLE WITH FLAT TIRE(S)

- (a) Follow all procedures.



**MAKE CERTAIN THE PARKING BRAKE IS ENGAGED AND TRANSMISSION IS IN GEAR (PARK) ON DISABLED VEHICLE BEFORE ENGAGING THE WHEEL LIFT.**

- (b) If only one tire is flat, secure the inflated tire in normal fashion.
- (c) Reduce engine to idle, disengage PTO, and back the carrier until crosstubes are firmly against tires of vehicle to be towed. Take truck out of gear and apply parking brake.
- (d) Re-engage PTO and increase RPM's, then lower wheel lift to the ground and extend the wheel lift boom as far as possible against the flat tire. This should allow the crosstube to compress the flat tire completely. See Figure 3A.18

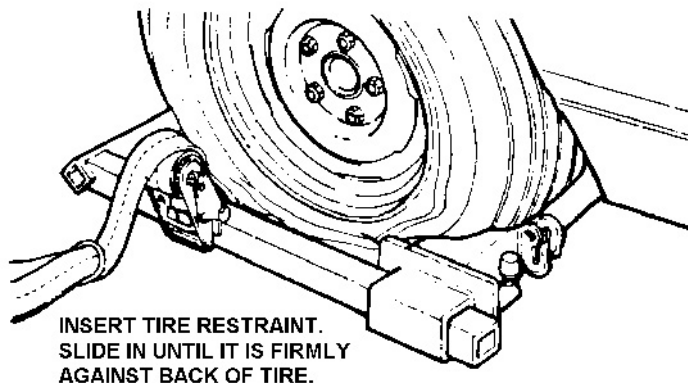


**Figure 3A.18**

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.5 HOOK-UP FOR VEHICLE WITH FLAT TIRE(S)

- (e) Install tire restraint on flat tire. See Figure 3A.19



**Figure 3A.19**

- (f) Place transmission in neutral and disengage parking brake on the vehicle to be towed.
- (g) Raise the vehicle and place blocks or timbers beneath the tire. Lower the Wheel Lift until the tire rests on the blocking.
- (h) After lowering vehicle onto blocking, reengage the parking brake and place the vehicles transmission in gear (park).
- (i) Extend crossbar further out against flat tire and tighten tire restraint. This will insure that, when the vehicle is raised, the wheel of the flat tire will rest on crossbar and tire restraint.
- (j) Raise the vehicle and remove blocking.
- (k) Release the safety strap ratchet and pull out desired length of safety strap.

## Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT

### 3A.5 HOOK-UP FOR VEHICLE WITH FLAT TIRE(S)

- (l) When engaging safety strap on tire, be certain the strap has the tire pulled completely to the wheel to insure proper installation. See Figure 3A.20

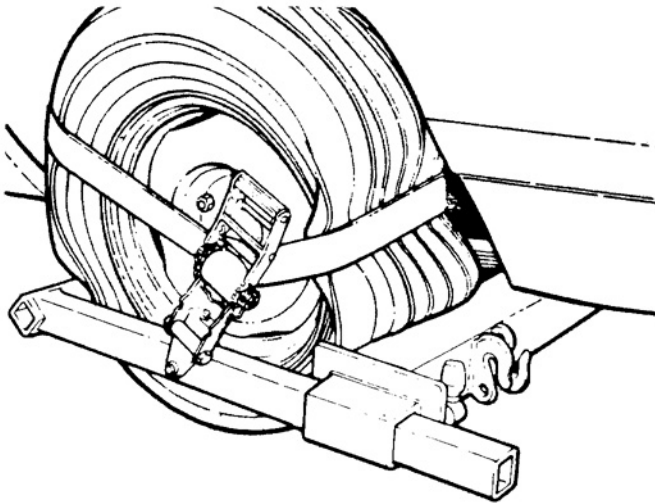


Figure 3A.20



#### **WARNING**

**WHEN TOWING FROM REAR AXLES, SECURE STEERING WHEEL OF VEHICLE. DO NOT RELY ON THE STEERING WHEEL LOCKING DEVICE.**



#### **WARNING**

**USE SAFETY CHAINS ON ALL TOWING AND LIFTING APPLICATIONS.**

- (m) Retract wheel lift boom, making certain there is enough clearance between disabled vehicle and the tailgate of the carrier for sharp turns.
- (n) Using the Wheel Lift "UP-DOWN" control, raise vehicle to desired towing height and reinstall the safety pin.

## **Section IIIA - OPERATING INSTRUCTIONS-WHEEL LIFT**

### **3A.5 HOOK-UP FOR VEHICLE WITH FLAT TIRE(S)**

#### **NOTE**

**THE CLOSER TO THE TAILGATE OF THE CARRIER BODY A VEHICLE IS TOWED, THE MORE FRONT END WEIGHT WILL BE ALLOWED FOR DRIVING THE CARRIER. LEAVE ROOM TO MAKE TURNS WITHOUT CAUSING DAMAGE.**

#### **NOTE**

**WHEN TOWING FROM REAR DRIVE AXLES, PUT VEHICLE IN GEAR AND ENGAGE PARKING BRAKE. WHEN TOWING FROM FRONT DRIVE AXLES, PUT VEHICLE IN GEAR AND DISENGAGE PARKING BRAKE.**

## **Section IIIA - OPERATING INSTRUCTIONS**

### **WHEEL LIFT**

#### **3A.6 AUTOGRIP SELF LOADING OPERATION**

The AutoGrip system was designed to hydraulically engage, lift and tow a vehicle by its wheels. The AutoGrip's hydraulic system comprises the following components:

1. Directional control valve - open center 4 way - 3 position - 20 GPM
2. Dual counter-balance valve
3. Flow divider
4. Double acting hydraulic cylinders

The directional control valve governs the flow of oil that causes the wheel arms to rotate. The dual counter-balance valve hydraulically locks the wheel arms from moving while the control valve is in the neutral position. The flow divider receives the oil from the control valve through its input port, divides it in half and sends it to the base end of the wheel arm cylinders through two output ports.

This hydraulic arrangement makes sure that the cylinders extend (wheel arms close) at the same speed regardless of the pressure within the cylinder. This is an important feature because the carrier operator typically will be operating the wheel lift from one side of the carrier. When the operator engages the vehicles wheel on his side of the carrier with the proper grip, the opposite wheel arm will be in the same position with the same grip.

If the differential pressure between the wheel arm cylinders is great enough, the flow divider will leak internally permitting the low pressure cylinder to continue extending while the high pressure cylinder will remain motionless. This is a convenient feature with hook-ups having one flat tire and one inflated tire because the wheel arm engaging the flat tire will continue rotating for a tighter grip.

## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT (cont'd)

#### 3A.6 AUTOGRIP SELF LOADING OPERATION (cont'd)

- (a) From the wheel lift storage position, open the arms and extend the wheel lift. Look through the rear window and back the wrecker toward the vehicle to be towed. Use the arms as a guide to locate the center of the vehicle. See Figure 4A.27



**Figure 4A.27**

- (b) Lower the wheel lift to the ground. Use the rear view mirror on the door to judge the wheel lift distance from the ground. See Figure 4A.28



**Figure 4A.28**

## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT (cont'd)

#### 3A.6 AUTOGRIP SELF LOADING OPERATION (cont'd)

- (c) Back the wrecker rearward until the wheel lift bumps the tires. Look into the rear view mirror and close the arms. Release the switch immediately when the arm becomes visible in the mirror. See Figure 4A.29



Figure 4A.29

- (d) Raise the wheel lift to the desired tow height. See Figure 4A.30



Figure 4A.30

## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT (cont'd)

#### 3A.6 AUTOGRIP SELF LOADING OPERATION (cont'd)

- (e) The wheel arm is equipped with two vertical slots to receive the T-hook on one end of the basket strap. After lifting the vehicle to the proper towing position, insert the basket strap T-hook into the slot in the L-arm. See Figure 4A.31.



**Figure 4A.31**

- (f) Position the basket straps over the tires to restrain the vehicle from lifting out of the wheel lift. See Figure 4A.32.



**Figure 4A.32**



## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT (cont'd)

#### 3A.6 AUTOGRIP SELF LOADING OPERATION (cont'd)

- (g) The wheel lift crossbar is equipped with two hooks on each end to receive the chain on the other end of the basket strap. Pull the strap tight and insert the chain into the grab hook located on the crossbar. Secure the chain in the hook by inverting the excess chain in the outer grab hook. See Figure 4A.33



**Figure 4A.33**

- (h) With the basket straps properly installed, the vehicle is safely secured for towing. See Figure 4A.34



**Figure 4A.34**

## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT

#### 3A.7 SAFETY CHAIN HOOK-UP

- (a) Extend the free end of the chain from the chain tray.
- (b) Route the free end of the chain to the vehicle to be towed, looping the chain around the crossbar, attaching it to the vehicle being towed. See Figure 3B.9.



Figure 3B.9



## WARNING

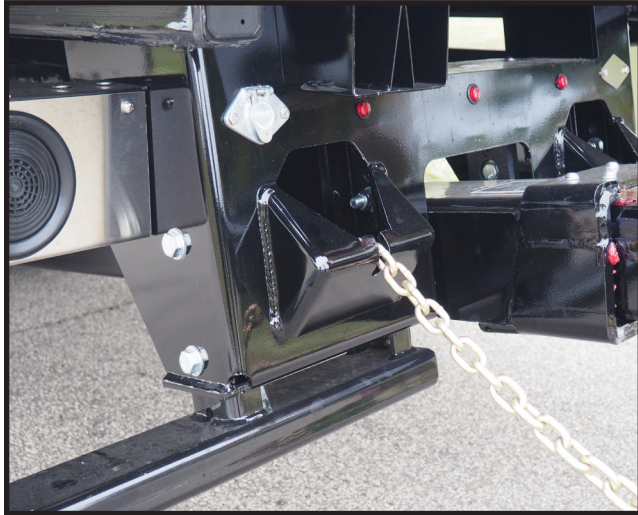
Safety straps and chains referred to in the manual are not optional attachments. They are components required for attaching a towed vehicle to the wheel lift and truck. Failure to use these fastenings will result in damage to the towed vehicle.

## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT

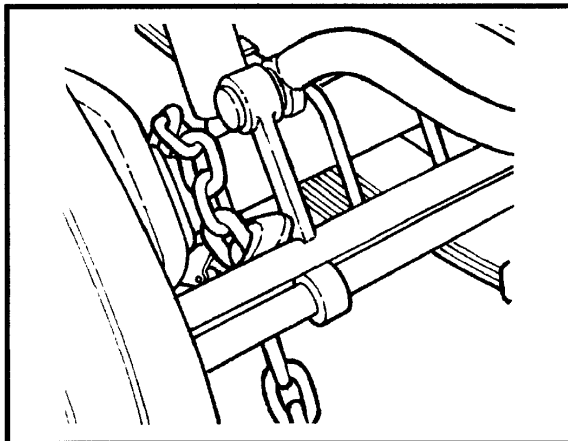
#### 3A.7 SAFETY CHAIN HOOK-UP (cont'd)

- (c) Reposition the safety chains and lock them into the chain slots allowing sufficient slack for turning. See Figure 3B.10.



**Figure 3B.10**

- (d) Figures 3B.11, 3B.12, and 3B.13 illustrate some suggested hook-ups for safety chains, or consult the AAA Towing Manual.



**Figure 3B.11**

## Section IIIA - OPERATING INSTRUCTIONS

### WHEEL LIFT

#### 3A.7 SAFETY CHAIN HOOK-UP (cont'd)

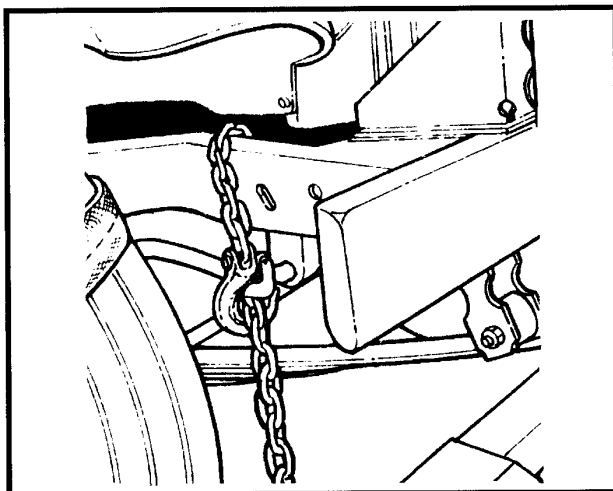


Figure 3B.12

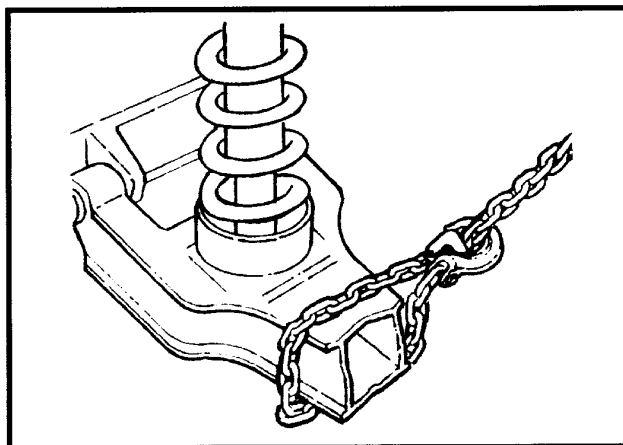
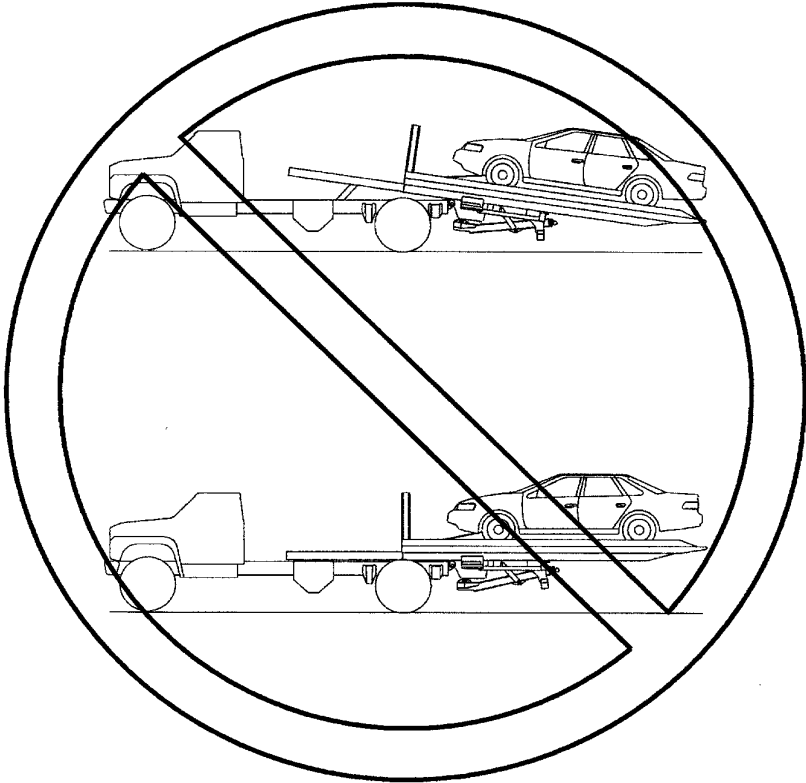


Figure 3B.13



## Section IIIB - OPERATING INSTRUCTIONS IMPROPER OPERATION



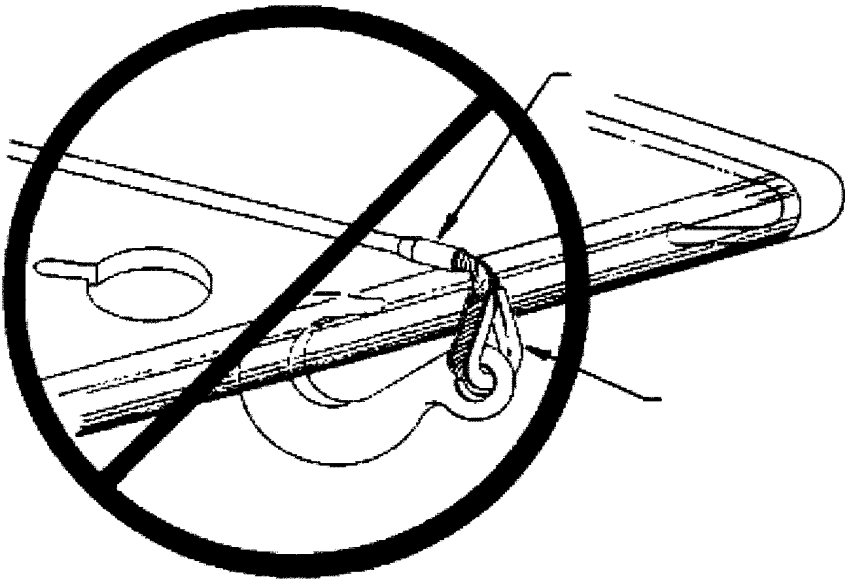
**DO NOT** tilt the carrier when the bed is loaded and extended. The bed should be substantially forward when tilting the carrier. Improper operation can damage the carrier and truck frame. The subframe stabilizer must be on the ground when sliding the bed.

Section IIIB - OPERATING INSTRUCTIONS  
IMPROPER OPERATION



Clamps are **NOT** acceptable.  
**DO NOT USE THEM.**

Section IIIB - OPERATING INSTRUCTIONS  
IMPROPER OPERATION



**DO NOT** distort the cable,  
thimble or swage.





## Section IV - MAINTENANCE

Inspect your unit regularly for worn, corroded, or damaged parts. Working parts in this condition must be replaced immediately.

Liability on your part may arise by operating your unit in a defective condition.



### WARNING

**Before attempting any adjustments or repairs to this vehicle; turn off the engine, secure the emergency brake, and insert appropriate safety blocking. Failure to comply with these recommendations can result in bodily injury.**

#### HYDRAULIC OIL:

Change oil in the reservoir when it is dirty or contaminated. The oil level is to be 3 inches from top of the tank. Over-filling the tank will cause the oil to spill out of the filler vent while on uneven ground or from air build-up in the tank. Factory installed units are supplied with a high quality multi-purpose ATF.



### CAUTION

**Do Not mix dissimilar oils in the system.**

#### FILTER:

Replace the filter every six months. The filter should be rated at 30 GPM, 250 PSI and 25 Microns. Filters that do not meet these specifications may blow off.

## **Section IV - MAINTENANCE**

- 4.1** The continued operation of your carrier is largely dependent upon adherence to a properly scheduled maintenance program. For this reason, we have provided the following information regarding lubrication, preventative maintenance and hydraulic system care.

### **4.2 HYDRAULIC SYSTEM**

The importance of absolute cleanliness of the hydraulic system cannot be over stressed. The smallest amount of grit, metal flake or other foreign material in the system can cause extensive damage to pumps, motors and valves. Miller Industries has taken every measure to assure that each component and fitting was thoroughly cleaned before your carrier was shipped to you. Therefore, servicing of the system should be done with extreme care.

- (a) Before checking oil level in reservoir, wipe away all dirt, grease and grime around filter cap before removing it. Make certain that all containers, funnels and pouring spouts are absolutely clean before filling reservoir.
- (b) When replacing hoses, fittings or other components, clean thoroughly, dismantle and reassemble carefully.
- (c) Failure to observe these precautions, and failure to change the filter elements at regular intervals could result in loss of your warranty in the event of failure to certain components.

### **4.3 LUBRICATION & PREVENTIVE MAINTENANCE**

The following general lubrication and preventive maintenance should be performed at least once per month for moderate usage, or more often as required, for heavy usage.

- (a) Inspect, repair or replace any worn, cracked, leaking, otherwise damaged components including, but not limited to, the following:
  - 1. **Hydraulic Oil Filter**
  - 2. **Oil Reservoir**
  - 3. **Controls**
  - 4. **Cables and Fittings**

## Section IV - MAINTENANCE

### 4.3 LUBRICATION & PREVENTIVE MAINTENANCE (cont'd)

5. **Hydraulic Hoses and Fittings**
  6. **Lights and Wiring**
  7. **Winch**
  8. **Pivot Bearing Surfaces and Pins**
- (b) Check hydraulic oil level in reservoir and fill to within 1" of the bottom of the filler neck with high quality multi-purpose ATF.
- (c) Replace hydraulic filter after the first week of operation, then every six (6) months thereafter.
- (d) Tighten all bolts. Vibration and stress may loosen even properly torqued bolts.
- (e) Lubricate all grease fittings on the carrier including:
- (1) **Control Rods and Control Handle Shafts**
  - (2) **Cable**
  - (3) **Winch**
  - (4) **Cylinder Pivot Bearings**
  - (5) **Crossbar Pivot**
  - (6) **Wheel Lift Slide Pads and Pivots**
  - (7) **Frame Slide Pads**
  - (8) **Subframe Hinge Pin**
- (f) Oil all bearing surfaces which are not equipped with grease fittings. Use pump can with SAE 30 oil.
- (g) Grease both frame slide pads located inside main frame housing with Megaplex 2 Synthetic Fortified Grease or equivalent.
- (h) Check oil level in winch and fill to level of oil plug located on the side-plate of the gear housing. Use SAE 140 general purpose gear oil. Lubricate grease fitting on clutch (may be reached through plastic cap opening with winch engaged).

## Section IV - MAINTENANCE

### 4.3 LUBRICATION & PREVENTIVE MAINTENANCE (cont'd)

- (i) Lubricate cable with oily rag while re-spooling the cable onto the drum. Special cable lubricants are also available which have better penetrating qualities. Consult your local oil company for a list of them.

### 4.4 SUMMARY OF REQUIRED LUBRICANTS

- (a) **Worm Gear Oil** - SAE 140 general purpose gear oil.
- (b) **Grease** - Lithium extreme pressure lubricating grease NLGI 2.
- (c) **Oil for miscellaneous bearing surfaces** - SAE 30.
- (d) **Grease for frame slide pads** - Megaplex 2 Synthetic Fortified Grease or equivalent.
- (e) **Oil for cables** - Motor oil or special purpose cable lubricant.

#### NOTE

**THERE IS NO PRACTICAL WAY TO DETERMINE  
THE LIFE EXPECTANCY OF HYDRAULIC HOSES AND  
OTHER RUBBER COMPONENTS.**

**WHILE APPEARING TO BE IN EXCELLENT CONDITION,  
THESE COMPONENTS MAY BE ADVERSELY AFFECTED BY  
USAGE, WEATHER OR THE PASSING OF TIME.**

**THEREFORE, IT IS RECOMMENDED THAT ALL RUBBER  
COMPONENTS, ESPECIALLY HOSES, BE REPLACED EVERY  
FIVE (5) YEARS REGARDLESS OF APPEARANCE.**

## Section IV - MAINTENANCE

### 4.5 SLIDE PAD INSPECTION

**NOTE**  
**SLIDE PADS MUST BE INSPECTED**  
**FOR WEAR MONTHLY.**

- (a) Start truck engine and engage PTO.
- (b) Lift "BED TRAVEL" control and allow bed to fully extend, exposing slide pads.
- (c) Wipe away all grease from slide pads and sills for proper inspection of slide pad wear.
- (d) After wiping away all grease, inspect slide pads for wear.



**CAUTION**

**NEVER ALLOW SLIDE PADS TO WEAR TO  
TOP OF SCREW HEADS**

- (e) If slide pads do not require replacement, re-grease liberally with fresh Megaplex 2 Synthetic Fortified Grease or equivalent.
- (f) If replacement is required, use the following procedures for proper replacement of slide pads.

## **Section IV - MAINTENANCE**

### **4.6 SUBFRAME SLIDE PAD REPLACEMENT**

- (a) Remove the bed to extend cylinder pin from the rod end of the bed extend cylinder.
- (b) Using an approved lifting device, and the key hole shaped anchoring holes, located at the front and rear of the carrier bed, slide bed back until the eighth rib from front of bed is even with rear of hose tray.
- (c) Disconnect the winch hoses from the bed.
- (d) Disconnect all bed wiring from junction box bed and pull wires out from the rear.
- (e) With lifting devices, slide bed completely off tilt frame.
- (f) Remove worn slide pads and replace with new slide pads.
- (g) After replacing slide pads, re-install the bed, winch hoses and wires.

## Section IV - MAINTENANCE

### 4.7 CARE OF ALUMINUM CARRIER DECK

The Aluminum Carrier Deck is constructed of high grade aluminum. It is necessary to care for the deck as follows:

1. **Never** leave the deck dirty. It should be washed using a mild detergent and cool water.
2. Periodically use an automotive wax to protect the deck from environmental corrosion.
3. **DO NOT** use any solvent or petroleum distillate cleaners on the aluminum deck!
4. **DO NOT** use engine cleaning or whitewall cleaning compounds on the deck.
5. **DO NOT** steam clean.

### 4.8 CARE OF STEEL CARRIER DECK

The Steel Carrier Deck is constructed of high grade steel with painted finish. Care for the deck as follows:

1. **Never** leave the deck dirty. It should be cleaned, washed and cared for in the same manner as the truck it is mounted on.
2. Periodically use an automotive wax to protect the deck from environmental corrosion.
3. **DO NOT** use any solvent or petroleum distillate cleaners on the steel deck.
4. **DO NOT** use engine cleaning or whitewall cleaning compounds on the deck.

## Section IV - MAINTENANCE

### LUBRICATION:

Lubricate the unit every 30 days or less if conditions warrant. Use Lithium based extreme pressure grease at designated points.

Grease fittings are installed at all pivot points needing lubrication. Failure to lubricate these points can allow the grease fittings to corrode. Miller will not accept liability as a result of damage caused by grease fittings that will not take grease. See Lubrication Chart.

**SUBFRAME SLIDE PADS:** Carriers equipped with steel beds have slide pads that are mounted with recessed screws to the top of the subframe slide rails. In order to maximize the life of these slide pads, it is important to keep them slippery preferably with grease. They will wear prematurely if the bed is slid on these pads when they are dry or if these pads are subjected to abrasives. Although these slide pads are made of high performance plastic, plastics do not like friction combined with abrasives of any kind which can be sand, gravel, grit or rust. Sliding friction on plastic must be smooth and slippery for maximum performance.

### WINCH:

Consult the winch manufacturer's manual.

### WIRE ROPE:

The wire rope should be cleaned and oiled every six months or less if conditions warrant.

### PTO:

Within the first week of use, recheck the installation of the PTO. Check for leaks and loose routing hardware (studs, cap screws, nuts). Periodically check for transmission fluid leaks where the PTO joins the transmission. If the transmission is leaking fluid at the PTO, the leak must be corrected immediately to prevent substantial fluid loss and damage to the transmission. Consult the transmission manufacturer's recommendations for the transmission service schedule

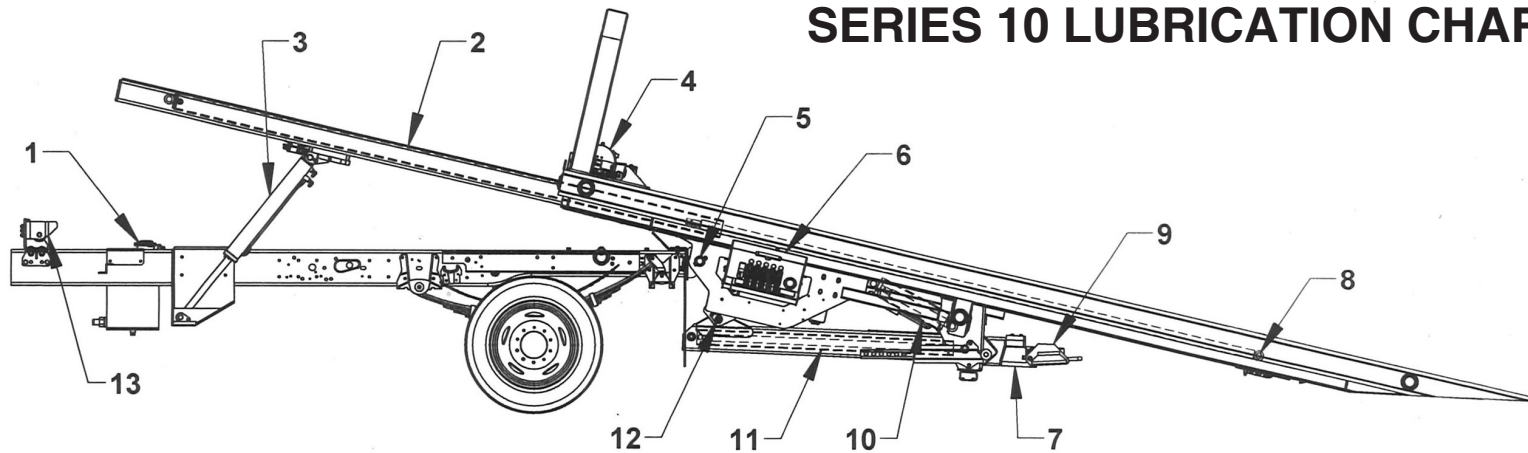
### BOLTS:

Make sure all bolts are properly tightened. Vibration and stress may loosen even properly torqued bolts.



## Section IV - MAINTENANCE LUBRICATION

### SERIES 10 LUBRICATION CHART



| REF NO. | DESCRIPTION                   | SERVICE       | LUBRICANT                      | NUMBER OF POINTS | FREQUENCY (HOURS) |
|---------|-------------------------------|---------------|--------------------------------|------------------|-------------------|
| 1       | OIL TANK                      | CHANGE OIL    | MULTI-PURPOSE ATF              | 1                | 1000              |
| 1       | OIL TANK                      | CHANGE FILTER | P/N 76271                      | 1                | 250 OR 6 MONTHS   |
| 2       | SLIDE RAILS                   | LUBE          | EP OR MOLY GREASE NLGI 2       | 4                | 20 OR 1 MONTH     |
| 3       | TILT CYLINDERS                | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 4                | 100 OR 2 MONTHS   |
| 4       | WINCH GEAR BOX (WORM)         | CHANGE OIL    | SAE 140                        | 1                | 1000              |
| 4       | WINCH CABLE                   | LUBE          | OIL                            | 1                | 100 OR 2 MONTHS   |
| 4       | WINCH CLUTCH ACTUATOR         | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 1                | 50 OR 1 MONTH     |
| 4       | WINCH CLUTCH YOKE FORK (WORM) | LUBE GROOVE   | MOLY GREASE NLGI 2             | 1                | 50 OR 1 MONTH     |
| 5       | SUBFRAME HINGE PIN            | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 2                | 100 OR 2 MONTHS   |
| 6       | CONTROL PIVOT LINKAGE         | LUBE          | SPRAY LUBRICANT                | 10 OR 12         | 100 OR 2 MONTHS   |
| 7       | WHEEL-LIFT WEAR PAD           | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 2                | 20 OR 1 MONTH     |
| 8       | SLIDEBACK CYLINDER            | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 2                | 100 OR 2 MONTHS   |
| 9       | WHEEL-LIFT CROSS BAR PIVOT    | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 3                | 20 OR 1 MONTH     |
| 9       | WHEEL GRID CAM LOCK PIN       | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 2 OR 4           | 100 OR 2 MONTHS   |
| 10      | WHEEL-LIFT LIFT CYLINDER      | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 4                | 100 OR 2 MONTHS   |
| 11      | WHEEL-LIFT EXTEND CYLINDER    | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 1                | 100 OR 2 MONTHS   |
| 12      | WHEEL-LIFT HINGE PIN          | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 2                | 100 OR 2 MONTHS   |
| 13      | BED HOLD DOWN                 | LUBE          | EXTREME PRESSURE GREASE NLGI 2 | 2                | 50 OR 1 MONTH     |



**IMPORTANT**

It is imperative that the wheel lift crossbar pivot be lubricated more frequently than the rest of the unit.

## Section V - PARTS

This Section is provided by the manufacturer for the purpose of ordering any component part of the **Series 10 GEN II Carrier** that may be required when part replacement is necessary. Be certain to use only original equipment replacement parts for warranty purposes as well as for keeping your **Series 10 GEN II Carrier** in its original state and optimum operating capacities.

When ordering replacement or spare parts be sure to provide the following information to your carrier manufacturer authorized representative.

1. **Manual Number & Date of Publication**
2. **Manual Page Number**
3. **Page Title**
4. **Reference Number of Part Desired**
5. **Part Number**
6. **Part Description**
7. **Quantity of Part Desired**

Providing this information will help ensure that the correct parts will be delivered to you in an expedient manner without delay. Should additional information be required for repair or replacement of certain components, contact your **MILLER INDUSTRIES DISTRIBUTOR**.

The Manufacturer reserves the right, without notice or obligation, to improve or modify their products, which may change the specifications, models and feature availability.

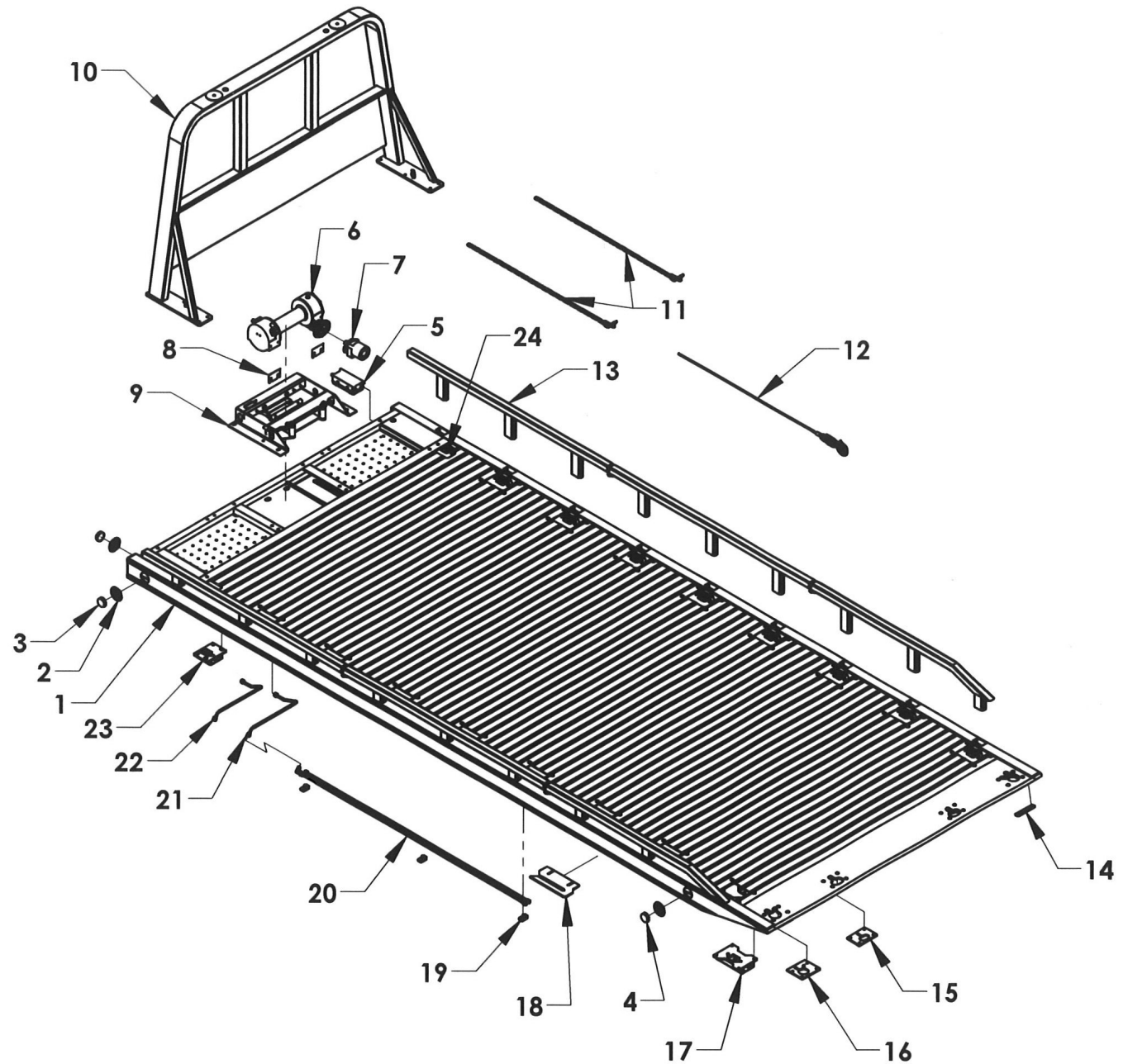
## Section V - PARTS

### REMOVABLE TUBE RAIL SIDES

| ASSEMBLY #   | BED LENGTH    | REMOVABLE TUBE RAIL SIDE COMBINATIONS |
|--------------|---------------|---------------------------------------|
| 09009171-190 | 19 TO 20.5 FT |                                       |
| 09009171-210 | 21 TO 22 FT   |                                       |

| REF | PART #  | DESCRIPTION                         | QTY       |
|-----|---------|-------------------------------------|-----------|
| 1   | 346071F | FRONT REMOVABLE TUBE RAIL - 3 POST  | SEE CHART |
| 2   | 346095F | FRONT REMOVABLE TUBE RAIL - 4 POST  | SEE CHART |
| 3   | 346071M | MIDDLE REMOVABLE TUBE RAIL - 3 POST | SEE CHART |
| 4   | 346064  | REAR REMOVABLE TUBE RAIL - 3 POST   | SEE CHART |
| 5   | 0306070 | LYNCH PIN - 7/16 x 1-3/4 IN.        | SEE CHART |

Section V - PARTS  
ALUMINUM BED ASSEMBLY  
GEN 3 SERIES 10



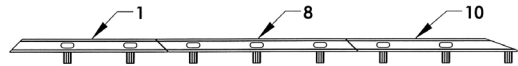
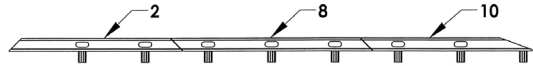
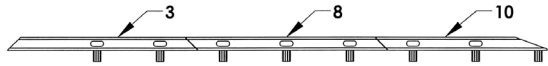
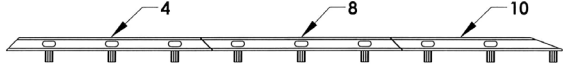
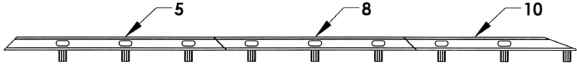
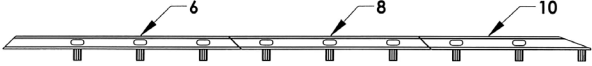
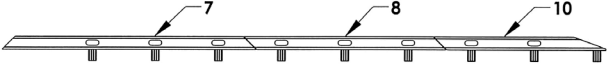
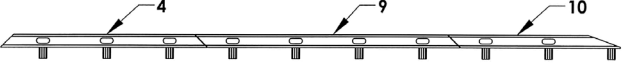
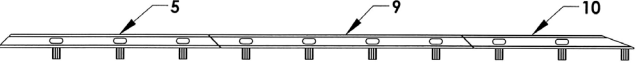
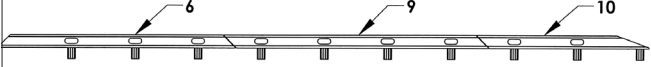
## Section V - PARTS

### ALUMINUM BED ASSEMBLY GEN II REMOVABLE RAIL

| REF | PART #          | QTY | DESCRIPTION                                                               |
|-----|-----------------|-----|---------------------------------------------------------------------------|
| 1   | 301810C3CCT-XXX | 1   | SERIES 10 G3 AL BED WELDMENT<br>XXX=190, 195, 205, 210, 215, 220          |
| 2   | 0311516         | 6   | 2-1/2" MARKER LIGHT GROMMET                                               |
| 3   | 0311513         | 4   | 2-1/2" AMBER MARKER LIGHT                                                 |
| 4   | 0311512         | 2   | 2-1/2" RED MARKER LIGHT                                                   |
| 5   | 0303385         | 1   | 10 POST JUNCTION BOX                                                      |
| 6   | 0308698         | 1   | RAMSEY 8000 LB WORM GEAR WINCH                                            |
| 7   | 0320147         | 1   | RAMSEY WINCH MOTOR 5 CUBIC INCH                                           |
| 8   | 0701172         | 2   | SPACER WINCH BRACKET                                                      |
| 9   | 0940425         | 1   | WINCH MOUNTING FRAME                                                      |
| 10  | 0809558-XX      | 1   | CAB PROTECTOR<br>XX= 38, 45, 48, 50, 52, 54, 57, 60, 62, 64               |
| 11  | 0302493         | 1   | FRONT SAFETY CHAIN ASSEMBLY 5/16 x 8'                                     |
| 12  | 0301669         | 2   | WINCH CABLE ASSEMBLY                                                      |
| 13  | 09009171-XXX    | 1   | REMOVABLE TUBE RAIL (SEE CHART)                                           |
| 14  | 07004889        | 2   | APPROACH SKID PLATE                                                       |
| 15  | 34521           | 2   | ALUM APPROACH PLATE CHAINLOCK                                             |
| 16  | 07007442        | 2   | ALUM APPROACH PLATE CHAINLOCK - 2 WAY                                     |
| 17  | 08001669        | X   | CHAINLOCK - SIDE CHAIN BINDER                                             |
| 18  | 33813           | 1   | ANTI-TILT PLATE                                                           |
| 19  | 0751188         | 3   | FLUID TUBE MOUNTING BLOCK - LOWER                                         |
| 20  | 383S1-XXX       | 2   | SERIES 10/12/16 UNDER BODY FLUID TUBE<br>XXX=190, 195, 205, 210, 215, 220 |
| 21  | 0752168-R       | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-LONG                                 |
| 22  | 0752167-R       | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-SHORT                                |
| 23  | 08004844L       | 1   | CHAINLOCK-FRONT CHAIN BINDER - LH                                         |
| 24  | 08004844R       | 1   | CHAINLOCK-FRONT CHAIN BINDER - RH                                         |

## Section V - PARTS

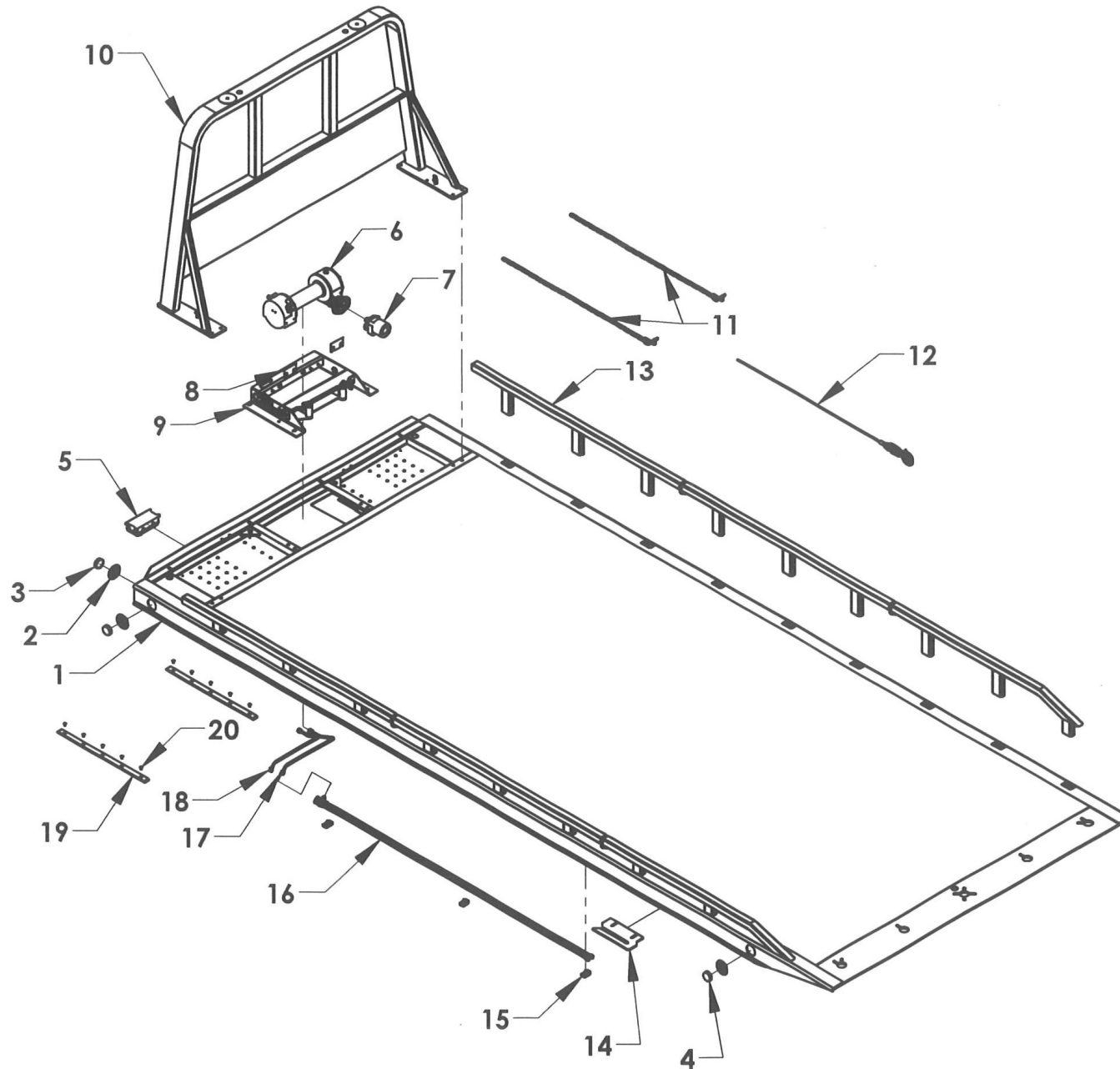
### REMOVABLE BLADE RAIL SIDES

| ASSEM # | BED LENGTH | REMOVABLE BLADE RAIL SIDE COMBINATIONS                                               |
|---------|------------|--------------------------------------------------------------------------------------|
| 34B175  | 17.5 FT    |   |
| 34B180  | 18.0 FT    |   |
| 34B185  | 18.5 FT    |   |
| 34B190  | 19.0 FT    |   |
| 34B195  | 19.5 FT    |   |
| 34B200  | 20.0 FT    |   |
| 34B205  | 20.5 FT    |   |
| 34B210  | 21.0 FT    |   |
| 34B215  | 21.5 FT    |   |
| 34B220  | 22.0 FT    |  |

| REF | PART #       | DESCRIPTION                          | QTY       |
|-----|--------------|--------------------------------------|-----------|
| 1   | 34B060FL & R | FRONT REMOVABLE BLADE RAIL - 2 POST  | SEE CHART |
| 2   | 34B066FL & R | FRONT REMOVABLE BLADE RAIL - 2 POST  | SEE CHART |
| 3   | 34B072FL & R | FRONT REMOVABLE BLADE RAIL - 2 POST  | SEE CHART |
| 4   | 34B078FL & R | FRONT REMOVABLE BLADE RAIL - 3 POST  | SEE CHART |
| 5   | 34B084FL & R | FRONT REMOVABLE BLADE RAIL - 3 POST  | SEE CHART |
| 6   | 34B090FL & R | FRONT REMOVABLE BLADE RAIL - 3 POST  | SEE CHART |
| 7   | 34B096FL & R | FRONT REMOVABLE BLADE RAIL - 3 POST  | SEE CHART |
| 8   | 34B072ML & R | MIDDLE REMOVABLE BLADE RAIL - 3 POST | SEE CHART |
| 9   | 34B096ML & R | MIDDLE REMOVABLE BLADE RAIL - 4 POST | SEE CHART |
| 10  | 34B064RL & R | REAR REMOVABLE BLADE RAIL - 3 POST   | SEE CHART |

## Section V - PARTS

### STEEL BED ASSEMBLY GEN II REMOVABLE TUBE RAIL



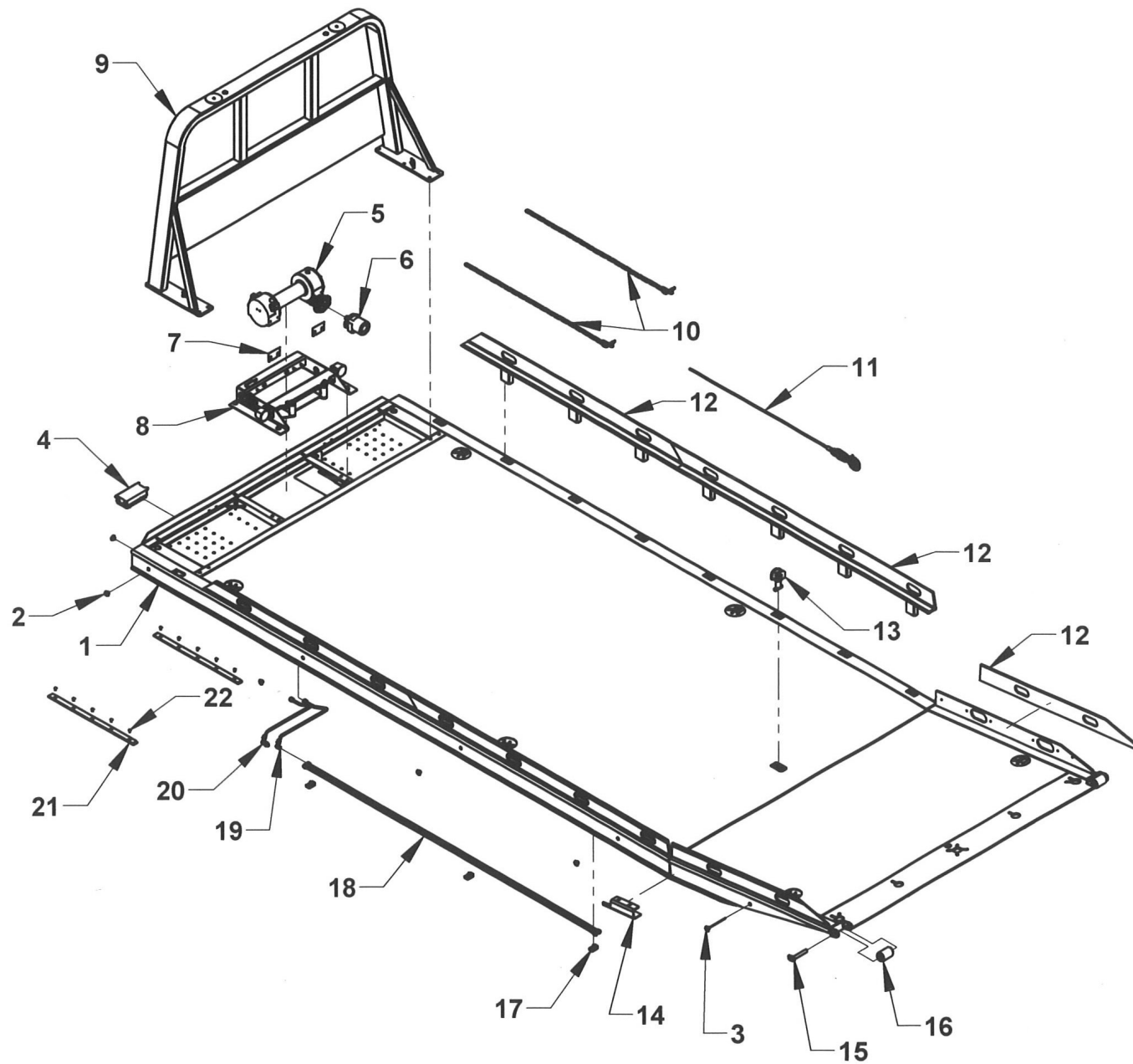


## Section V - PARTS

### STEEL BED ASSEMBLY GEN II REMOVABLE TUBE RAIL

| REF | PART #       | QTY | DESCRIPTION                                                               |
|-----|--------------|-----|---------------------------------------------------------------------------|
| 1   | 30284102XXX  | 1   | SERIES 10 G2 ST BED WELDMENT<br>XXX=190, 195, 205, 210, 215, 220          |
| 2   | 0311516      | 6   | 2-1/2" MARKER LIGHT GROMMET                                               |
| 3   | 0311513      | 4   | 2-1/2" AMBER MARKER LIGHT                                                 |
| 4   | 0311512      | 2   | 2-1/2" RED MARKER LIGHT                                                   |
| 5   | 0303385      | 1   | 10 POST JUNCTION BOX                                                      |
| 6   | 0308698      | 1   | RAMSEY 8000 LB WORM GEAR WINCH                                            |
| 7   | 0320147      | 1   | RAMSEY WINCH MOTOR 5 CUBIC INCH                                           |
| 8   | 0701172      | 2   | SPACER WINCH BRACKET                                                      |
| 9   | 0940425      | 1   | WINCH MOUNTING FRAME                                                      |
| 10  | 0809558-XX   | 1   | CAB PROTECTOR<br>XX= 38, 45, 48, 50, 52, 54, 57, 60, 62, 64               |
| 11  | 0302493      | 2   | FRONT SAFETY CHAIN ASSEMBLY 5/16 x 8'                                     |
| 12  | 0301669      | 1   | WINCH CABLE ASSEMBLY                                                      |
| 13  | 09009171-XXX | 1   | REMOVABLE TUBE RAIL (SEE CHART)                                           |
| 14  | 33813        | 1   | ANTI-TILT PLATE                                                           |
| 15  | 0751188      | 3   | FLUID TUBE MOUNTING BLOCK - LOWER                                         |
| 16  | 383S1-XXX    | 2   | SERIES 10/12/16 UNDER BODY FLUID TUBE<br>XXX=190, 195, 205, 210, 215, 220 |
| 17  | 0752168-R    | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-LONG                                 |
| 18  | 0752167-R    | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-SHORT                                |
| 19  | 07005597     | 2   | I-BEAM WEAR PAD                                                           |
| 20  | 04000844     | 10  | FHSCS 5/16-18 x 5/8 ZP                                                    |

**Section V - PARTS**  
**STEEL BED ASSEMBLY - BLADE RAIL SIDES**  
**GEN 2 SERIES 10 RIGHT APPROACH**



## Section V - PARTS

### STEEL BED ASSEMBLY - BLADE RAIL SIDES GEN 2 SERIES 10 RIGHT APPROACH

| REF | PART #       | QTY | DESCRIPTION                                                                 |
|-----|--------------|-----|-----------------------------------------------------------------------------|
| 1   | 3028102RXXX  | 1   | S10 G2 RA STEEL BED WELDMENT<br>XXX = 190, 195, 205, 210, 215, 220          |
| 2   | 0311521      | 10  | 3/4" AMBER MARKER LIGHT W/GROMMET                                           |
| 3   | 0311522      | 2   | 3/4" RED MARKER LIGHT W/GROMMET                                             |
| 4   | 0303385      | 1   | 10 POST JUNCTION BOX                                                        |
| 5   | 0308698      | 1   | RAMSEY 8000 LB WORM GEAR                                                    |
| 6   | 0320147      | 1   | WINCH MOTOR 5 CUBIC INCH                                                    |
| 7   | 0701172      | 2   | SPACER, WINCH BRACKET                                                       |
| 8   | 0940425      | 1   | WINCH MOUNTING FRAME                                                        |
| 9   | 0809558-XX   | 1   | CAB PROTECTOR<br>XX = 38, 45, 48, 50, 52, 54, 57, 60, 62, 64                |
| 10  | 0302493      | 2   | FRONT SAFETY CHAIN ASSEMBLY - 5/16 x 8'                                     |
| 11  | 0301669      | 1   | WINCH CABLE ASSEMBLY                                                        |
| 12  | 09001210-XXX | 1   | RIGHT APPROACH BLADE RAIL SIDES<br>XXX= 190, 195, 205, 210, 215, 220        |
| 13  | 0805324      | 1   | CABLE GUIDE WELDMENT (HOOK STYLE)                                           |
| 14  | 0750465      | 1   | ANTI-TILT PLATE RA                                                          |
| 15  | 0806252      | 2   | ROLLER TIP WHEEL KEEPER PIN                                                 |
| 16  | 0721483      | 2   | ROLLER                                                                      |
| 17  | 0751188      | 3   | FLUID TUBE MOUNTING BLOCK-LOWER                                             |
| 18  | 383S1-XXX    | 2   | SERIES 10/12/16 UNDER BODY FLUID TUBE<br>XXX = 190, 195, 205, 210, 215, 220 |
| 19  | 0752168-R    | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-LONG                                   |
| 20  | 0752167-R    | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-SHORT                                  |
| 21  | 07005597     | 2   | I-BEAM WEAR PAD                                                             |
| 22  | 04000844     | 10  | FHSCS 5/16-18 x 5/8 ZP                                                      |

## Section V - PARTS

### RIGHT APPROACH REMOVABLE BLADE RAIL SIDES

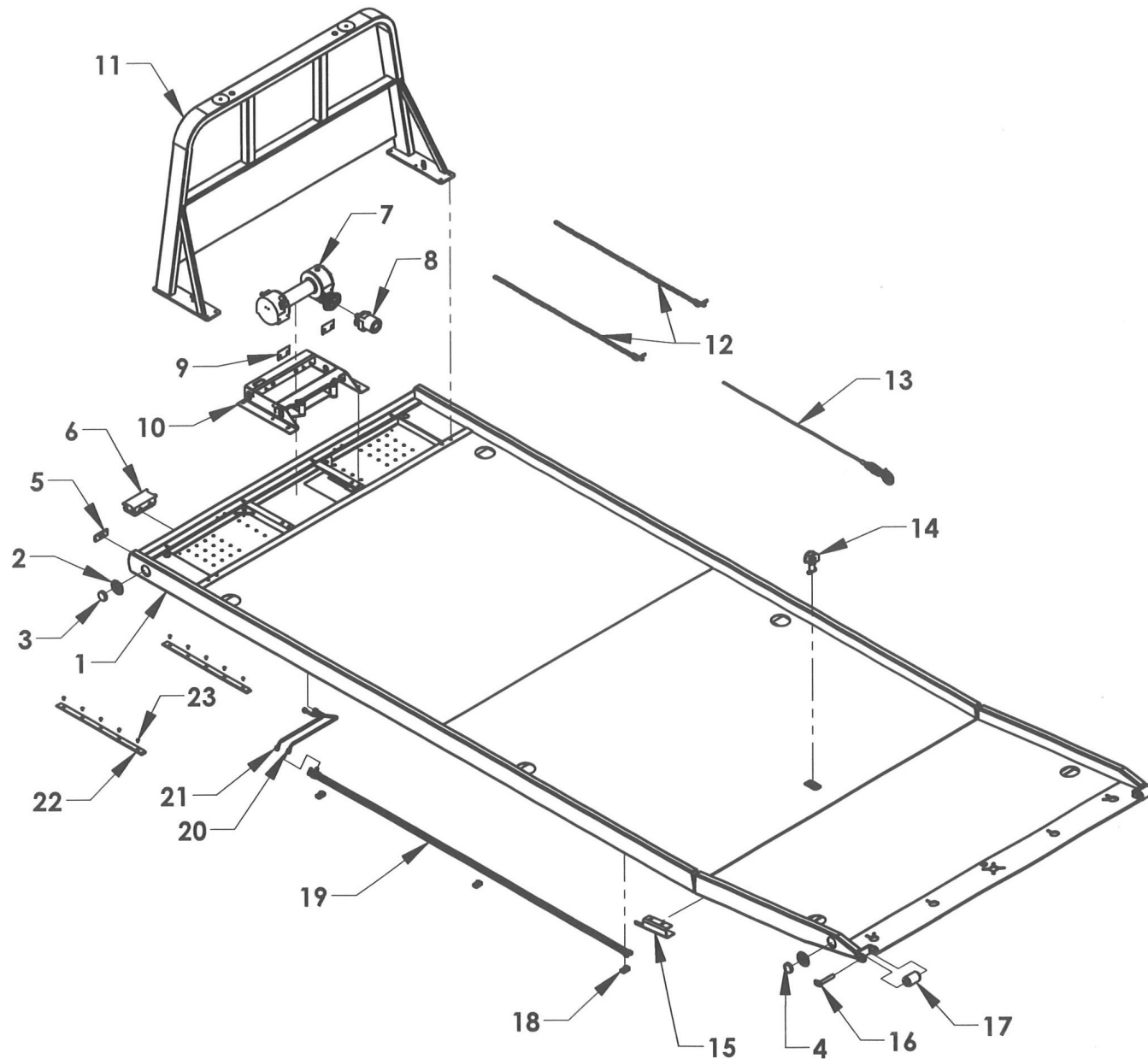
| ASSEMBLY #   | BED LENGTH | REMOVABLE BLADE RAIL SIDE COMBINATIONS                                              |
|--------------|------------|-------------------------------------------------------------------------------------|
| 09001210-190 | 19.0 FT    |  |
| 09001210-195 | 19.5 FT    |  |
| 09001210-200 | 20.0 FT    |  |
| 09001210-205 | 20.5 FT    |  |
| 09001210-210 | 21.0 FT    |  |
| 09001210-215 | 21.5 FT    |  |
| 09001210-220 | 22.0 FT    |  |

| REF | PART #            | DESCRIPTION                             | QTY       |
|-----|-------------------|-----------------------------------------|-----------|
| 1   | 08001089-190L & R | RA FRONT REMOVABLE BLADE RAIL - 3 POST  | SEE CHART |
| 2   | 08001089-195L & R | RA FRONT REMOVABLE BLADE RAIL - 3 POST  | SEE CHART |
| 3   | 08001089-200L & R | RA FRONT REMOVABLE BLADE RAIL - 3 POST  | SEE CHART |
| 4   | 08001089-205L & R | RA FRONT REMOVABLE BLADE RAIL - 4 POST  | SEE CHART |
| 5   | 08001089-210L & R | RA FRONT REMOVABLE BLADE RAIL - 4 POST  | SEE CHART |
| 6   | 08001089-215L & R | RA FRONT REMOVABLE BLADE RAIL - 4 POST  | SEE CHART |
| 7   | 08001089-220L & R | RA FRONT REMOVABLE BLADE RAIL - 4 POST  | SEE CHART |
| 8   | 0809192L & R      | RA MIDDLE REMOVABLE BLADE RAIL - 4 POST | SEE CHART |
| 9   | 0751006L & R      | RA REAR REMOVABLE BLADE RAIL            | SEE CHART |



## Section V - PARTS

### STEEL BED ASSEMBLY - TUBE SIDES GEN 2 SERIES 10 RIGHT APPROACH

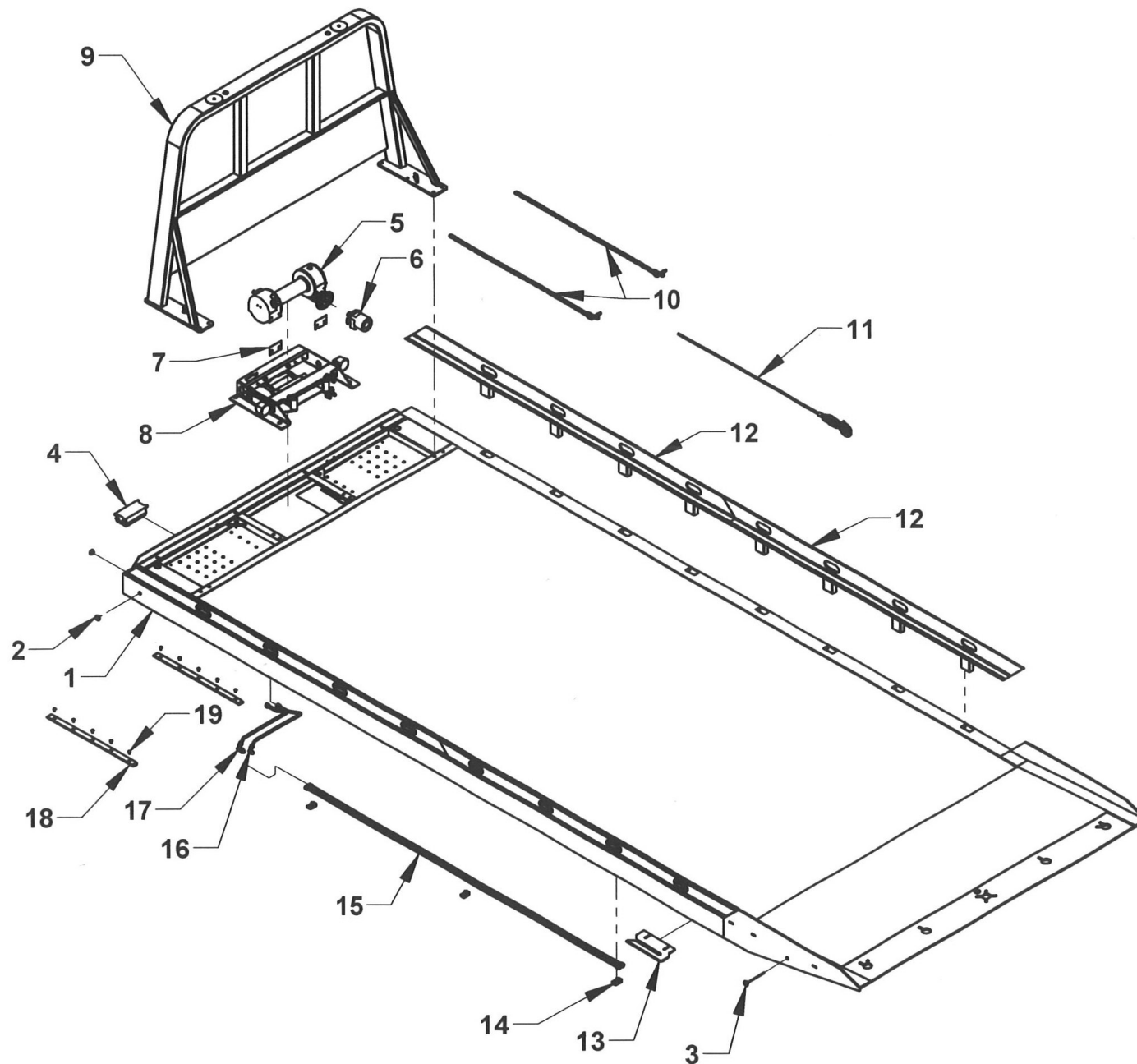


## Section V - PARTS

### STEEL BED ASSEMBLY - TUBE SIDES GEN 2 SERIES 10 RIGHT APPROACH

| REF | PART #       | QTY | DESCRIPTION                                                                 |
|-----|--------------|-----|-----------------------------------------------------------------------------|
| 1   | 3028102RXXX  | 1   | S10 G2 RA STEEL BED WELDMENT<br>XXX = 190, 195, 205, 210, 215, 220          |
| 2   | 0311521      | 10  | 3/4" AMBER MARKER LIGHT W/GROMMET                                           |
| 3   | 0311522      | 2   | 3/4" RED MARKER LIGHT W/GROMMET                                             |
| 4   | 0303385      | 1   | 10 POST JUNCTION BOX                                                        |
| 5   | 0308698      | 1   | RAMSEY 8000 LB WORM GEAR                                                    |
| 6   | 0320147      | 1   | WINCH MOTOR 5 CUBIC INCH                                                    |
| 7   | 0701172      | 2   | SPACER, WINCH BRACKET                                                       |
| 8   | 0940425      | 1   | WINCH MOUNTING FRAME                                                        |
| 9   | 0809558-XX   | 1   | CAB PROTECTOR<br>XX = 38, 45, 48, 50, 52, 54, 57, 60, 62, 64                |
| 10  | 0302493      | 2   | FRONT SAFETY CHAIN ASSEMBLY - 5/16 x 8'                                     |
| 11  | 0301669      | 1   | WINCH CABLE ASSEMBLY                                                        |
| 12  | 09001210-XXX | 1   | RIGHT APPROACH BLADE RAIL SIDES<br>XXX=190, 195, 205, 210, 215, 220         |
| 13  | 0805324      | 1   | CABLE GUIDE WELDMENT (HOOK STYLE)                                           |
| 14  | 0750465      | 1   | ANTI-TILT PLATE RA                                                          |
| 15  | 0806252      | 2   | ROLLER TIP WHEEL KEEPER PIN                                                 |
| 16  | 0721483      | 2   | ROLLER                                                                      |
| 17  | 0751188      | 3   | FLUID TUBE MOUNTING BLOCK-LOWER                                             |
| 18  | 383S1-XXX    | 2   | SERIES 10/12/16 UNDER BODY FLUID TUBE<br>XXX = 190, 195, 205, 210, 215, 220 |
| 19  | 0752168-R    | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-LONG                                   |
| 20  | 0752167-R    | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-SHORT                                  |
| 21  | 07005597     | 2   | I-BEAM WEAR PAD                                                             |
| 22  | 04000844     | 10  | FHSCS 5/16-18 x 5/8 ZP                                                      |

**Section V - PARTS**  
**STEEL BED ASSEMBLY - BLADE SIDES**  
**GEN 2 SERIES 10 SST**



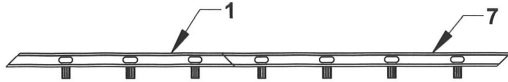
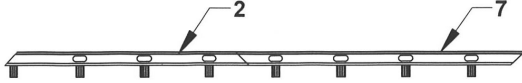
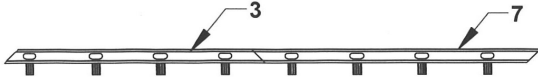
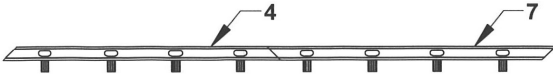
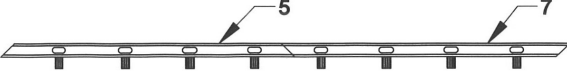
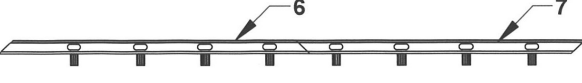
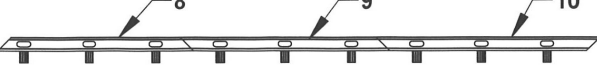
## Section V - PARTS

### STEEL BED ASSEMBLY GEN 2 SERIES 10 SST BLADE SIDES

| REF | PART #       | QTY | DESCRIPTION                                                                  |
|-----|--------------|-----|------------------------------------------------------------------------------|
| 1   | 30284102SXXX | 1   | S10 ST G2 SST BLADE SIDES BED WELDMENT<br>XXX = 190, 195, 205, 210, 215, 220 |
| 2   | 0311521      | 4   | 3/4" AMBER MARKER LIGHT W/GROMMET                                            |
| 3   | 0311522      | 2   | 3/4" RED MARKER LIGHT W/GROMMET                                              |
| 4   | 0303385      | 1   | 10 POST JUNCTION BOX                                                         |
| 5   | 0308698      | 1   | RAMSEY 8000 LB WORM GEAR                                                     |
| 6   | 0320147      | 2   | WINCH MOTOR 5 CUBIC INCH                                                     |
| 7   | 0701172      | 1   | SPACER, WINCH BRACKET                                                        |
| 8   | 0940425      | 1   | WINCH MOUNTING FRAME                                                         |
| 9   | 0809558-XX   | 1   | CAB PROTECTOR<br>XX = 38, 45, 48, 50, 52, 54, 57, 60, 62, 64                 |
| 10  | 0302493      | 2   | FRONT SAFETY CHAIN ASSEMBLY - 5/16 x 8'                                      |
| 11  | 0301669      | 1   | WINCH CABLE ASSEMBLY                                                         |
| 12  | 0909446-XXX  | 1   | SST BLADE RAIL SIDES<br>XXX = 190, 195, 205, 210, 215, 220                   |
| 13  | 33813        | 1   | ANTI-TILT PLATE                                                              |
| 14  | 0751188      | 3   | FLUID TUBE MOUNTING BLOCK-LOWER                                              |
| 15  | 383S1-XXX    | 2   | SERIES 10/12/16 UNDER BODY FLUID TUBE<br>XXX = 190, 195, 205, 210, 215, 220  |
| 16  | 0751968-R    | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-LONG                                    |
| 17  | 0751967-R    | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-SHORT                                   |
| 18  | 07005597     | 2   | I-BEAM WEAR PAD                                                              |
| 19  | 04000844     | 10  | FHSCS 5/16-18 x 5/8 ZP                                                       |

## Section V - PARTS

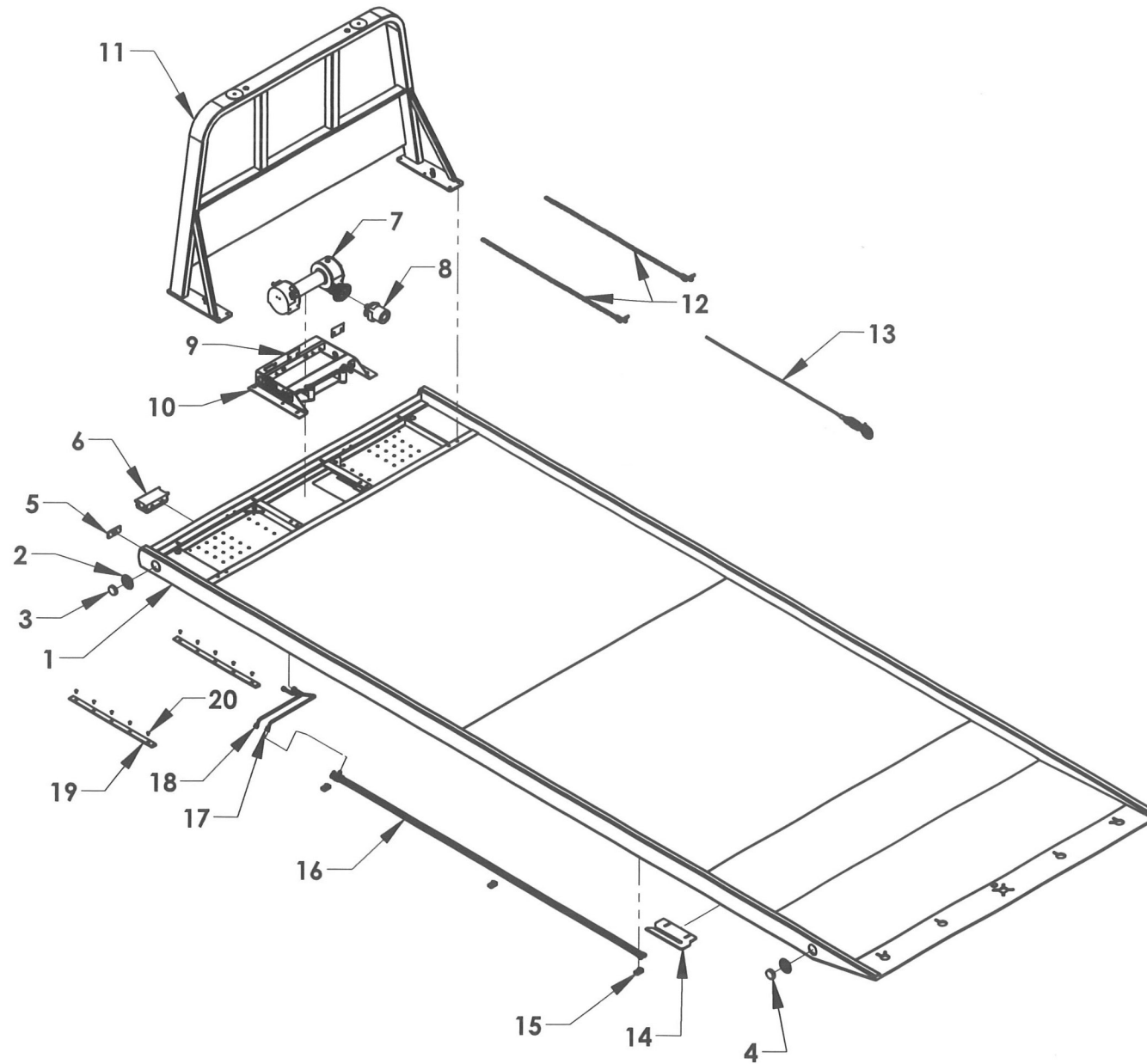
### SST REMOVABLE BLADE RAIL SIDES

| ASSEMBLY #  | BED LENGTH | REMOVABLE BLADE RAIL SIDE COMBINATIONS                                              |
|-------------|------------|-------------------------------------------------------------------------------------|
| 0909446-190 | 19.0 FT    |  |
| 0909446-195 | 19.5 FT    |  |
| 0909446-200 | 20.0 FT    |  |
| 0909446-205 | 20.5 FT    |  |
| 0909446-210 | 21.0 FT    |  |
| 0909446-215 | 21.5 FT    |  |
| 0909446-220 | 22.0 FT    |  |

| REF | PART #           | DESCRIPTION                              | QTY       |
|-----|------------------|------------------------------------------|-----------|
| 1   | 0809846-190L & R | SST FRONT REMOVABLE BLADE RAIL - 3 POST  | SEE CHART |
| 2   | 0809846-195L & R | SST FRONT REMOVABLE BLADE RAIL - 4 POST  | SEE CHART |
| 3   | 0809846-200L & R | SST FRONT REMOVABLE BLADE RAIL - 4 POST  | SEE CHART |
| 4   | 0809846-205L & R | SST FRONT REMOVABLE BLADE RAIL - 4 POST  | SEE CHART |
| 5   | 0809846-210L & R | SST FRONT REMOVABLE BLADE RAIL - 4 POST  | SEE CHART |
| 6   | 0809846-215L & R | SST FRONT REMOVABLE BLADE RAIL - 4 POST  | SEE CHART |
| 7   | 0809686L & R     | SST REAR REMOVABLE BLADE RAIL - 4 POST   | SEE CHART |
| 8   | 0809846-220L & R | SST FRONT REMOVABLE BLADE RAIL - 3 POST  | SEE CHART |
| 9   | 0809195L & R     | SST MIDDLE REMOVABLE BLADE RAIL - 3 POST | SEE CHART |
| 10  | 0809770L & R     | SST REAR REMOVABLE BLADE RAIL - 3 POST   | SEE CHART |

## Section V - PARTS

### STEEL BED ASSEMBLY GEN2 SERIES 10 SST TUBE SIDES

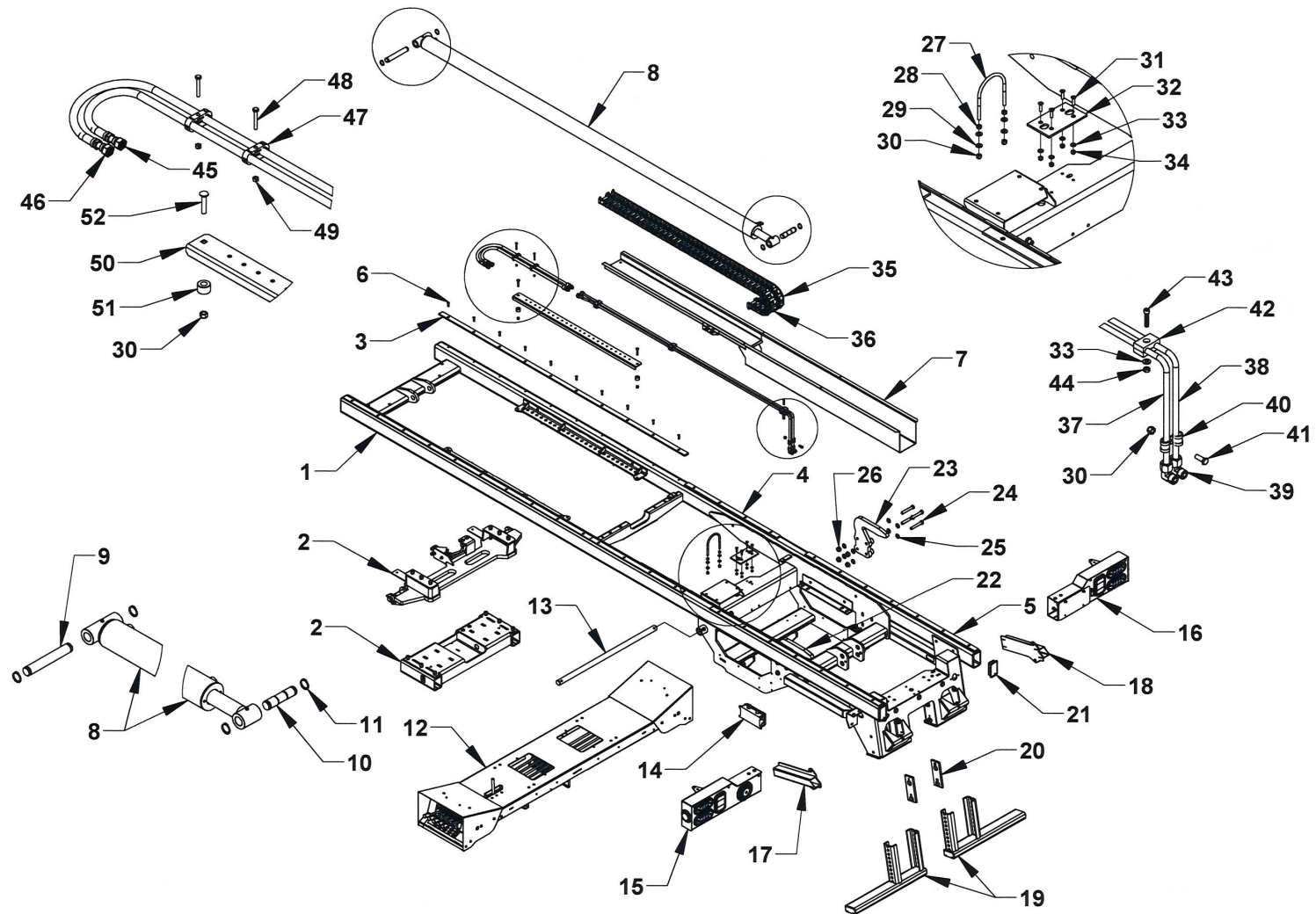


## Section V - PARTS

### STEEL BED ASSEMBLY GEN II SERIES 10 SST-TUBE SIDE

| REF | PART #          | QTY | DESCRIPTION                                                                    |
|-----|-----------------|-----|--------------------------------------------------------------------------------|
| 1   | 30284102SXXX-TX | 1   | SERIES 10 G2 ST SST BED TUBE SIDE WELDMENT<br>XXX=190, 195, 205, 210, 215, 220 |
| 2   | 0311516         | 4   | 2-1/2" MARKER LIGHT GROMMET                                                    |
| 3   | 0311513         | 2   | 2-1/2" AMBER MARKER LIGHT                                                      |
| 4   | 0311512         | 2   | 2-1/2" RED MARKER LIGHT                                                        |
| 5   | 0308360         | 2   | RECT REFLECTIVE LIGHT 4-3/8 x 1-1/2 - AMBER                                    |
| 6   | 0303385         | 1   | 10 POST JUNCTION BOX                                                           |
| 7   | 0308698         | 1   | RAMSEY 8000 LB WORM GEAR WINCH                                                 |
| 8   | 0320147         | 2   | RAMSEY WINCH MOTOR 5 CUBIC INCH                                                |
| 9   | 0701172         | 1   | SPACER WINCH BRACKET                                                           |
| 10  | 0940425         | 1   | WINCH MOUNTING FRAME                                                           |
| 11  | 0809558-XX      | 1   | CAB PROTECTOR<br>XX= 38, 45, 48, 50, 52, 54, 57, 60, 62, 64                    |
| 12  | 0302493         | 2   | FRONT SAFETY CHAIN ASSEMBLY 5/16 x 8'                                          |
| 13  | 0301669         | 1   | WINCH CABLE ASSEMBLY                                                           |
| 14  | 33813           | 1   | ANTI-TILT PLATE                                                                |
| 15  | 0751188         | 1   | FLUID TUBE MOUNTING BLOCK - LOWER                                              |
| 16  | 383S1-XXX       | 2   | SERIES 10/12/16 UNDER BODY FLUID TUBE<br>XXX=190, 195, 205, 210, 215, 220      |
| 17  | 0752168-R       | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-LONG                                      |
| 18  | 0752167-R       | 1   | WINCH MOTOR FLUID TUBE-S10 G2-RAMSEY-SHORT                                     |
| 19  | 07005597        | 2   | I-BEAM WEAR PAD                                                                |
| 20  | 04000844        | 10  | FHSCS 5/16-18 x 5/8 ZP                                                         |

**Section V - PARTS**  
**SERIES 10 GEN2 SUBFRAME COMPONENTS**  
**ADJUSTABLE TILT CYLINDERS**





## Section V - PARTS

### SERIES 10 GEN2 SUBFRAME COMPONENTS ADJUSTABLE TILT CYLINDERS

| REF | PART #      | QTY | DESCRIPTION                                                   |
|-----|-------------|-----|---------------------------------------------------------------|
| 1   | 08023049    | 1   | S10 ADJUST. TILT SUBFRAME - 19FT-W/L                          |
|     | 08023050    |     | S10 ADJUST. TILT SUBFRAME - 19FT-REESE HITCH                  |
|     | 08023051    |     | S10 ADJUST. TILT SUBFRAME - 22FT-W/L                          |
|     | 08023052    |     | S10 ADJUST. TILT SUBFRAME - 22FT-REESE HITCH                  |
|     | 08023053    |     | S10 ADJUST. TILT SUBFRAME - 22FT-W/L - REAR FUEL TNK.         |
|     | 08023054    |     | S10 ADJUST. TILT SUBFRAME - 22FT-REESE HITCH - REAR FUEL TNK. |
| 2   | 08023057G   | 1   | TILT CYLINDER OBT TRUNNION GROUP                              |
|     | 08023056G   |     | TILT CYLINDER IBT BOX GROUP                                   |
| 3   | 0308928-96  | 2   | SUBFRAME BEARING PAD 5/16 x 1-1/2 x 96                        |
| 4   | 0308928-36  | 2   | SUBFRAME BEARING PAD 5/16 x 1-1/2 x 36                        |
| 5   | 0308928N-66 | 2   | SUBFRAME BEARING PAD 5/16 x 1-1/2 x 66                        |
| 6   | 04000321    | 42  | BOLT 5/16 -18 x 1-1/4 COUNTERSUNK TORX ST                     |
| 7   | 08098242    | 1   | DUAL BAY HOSE TRAY                                            |
| 8   | 72A35120    | 1   | SLIDEBACK CYLINDER 3.5 BORE x 120 STROKE                      |
| 9   | 13302010    | 1   | SLIDEBACK CYLINDER MOUNTING PIN 1.230                         |
| 10  | 32117       | 1   | SLIDEBACK CYLINDER MOUNTING PIN 1.230                         |
| 11  | 86125E      | 4   | 1-1/4 SNAP RING - EXTERNAL                                    |
| 12  | 183126      | 1   | 6-SPOOL CONTROL STATION                                       |
|     | 183129      |     | 9-SPOOL CONTROL STATION                                       |
| 13  | 0752164     | 1   | SERIES 10 GEN2 SUBFRAME HINGE PIN                             |
| 14  | 0303385     | 1   | 10 POST JUNCTION BOX                                          |
| 15  | 0940325L    | 1   | CENTURY TAIL LIGHT HOUSING GROUP - LH                         |
| 16  | 0940325R    | 1   | CENTURY TAIL LIGHT HOUSING GROUP - RH                         |
| 17  | 160540L     | 1   | L-ARM STORAGE TUBE - 4K LH (OPTIONAL) - SCOOP                 |
|     | 160535L     |     | L-ARM STORAGE TUBE - 4K LH (OPTIONAL) - DROP-IN               |
|     | 0809287L    |     | L-ARM STORAGE TUBE - 4K LH (STD) SLIDE-IN ARM                 |
| 18  | 160540R     | 1   | L-ARM STORAGE TUBE - 4K RH (OPTIONAL) - SCOOP                 |
|     | 160535R     |     | L-ARM STORAGE TUBE - 4K RH (OPTIONAL) - DROP-IN               |
|     | 0809287R    |     | L-ARM STORAGE TUBE - 4K RH (STANDARD) SLIDE-IN ARM            |
| 19  | 0809188     | 2   | SERIES 10 EXTENSION STAND                                     |
| 20  | 0750409     | 2   | STABILIZER WHEEL LIFT GUIDE PAD                               |
| 21  | 0308748     | 2   | 5 x 3 x 5/16 SUBFRAME TUBE PLUG                               |

## Section V - PARTS

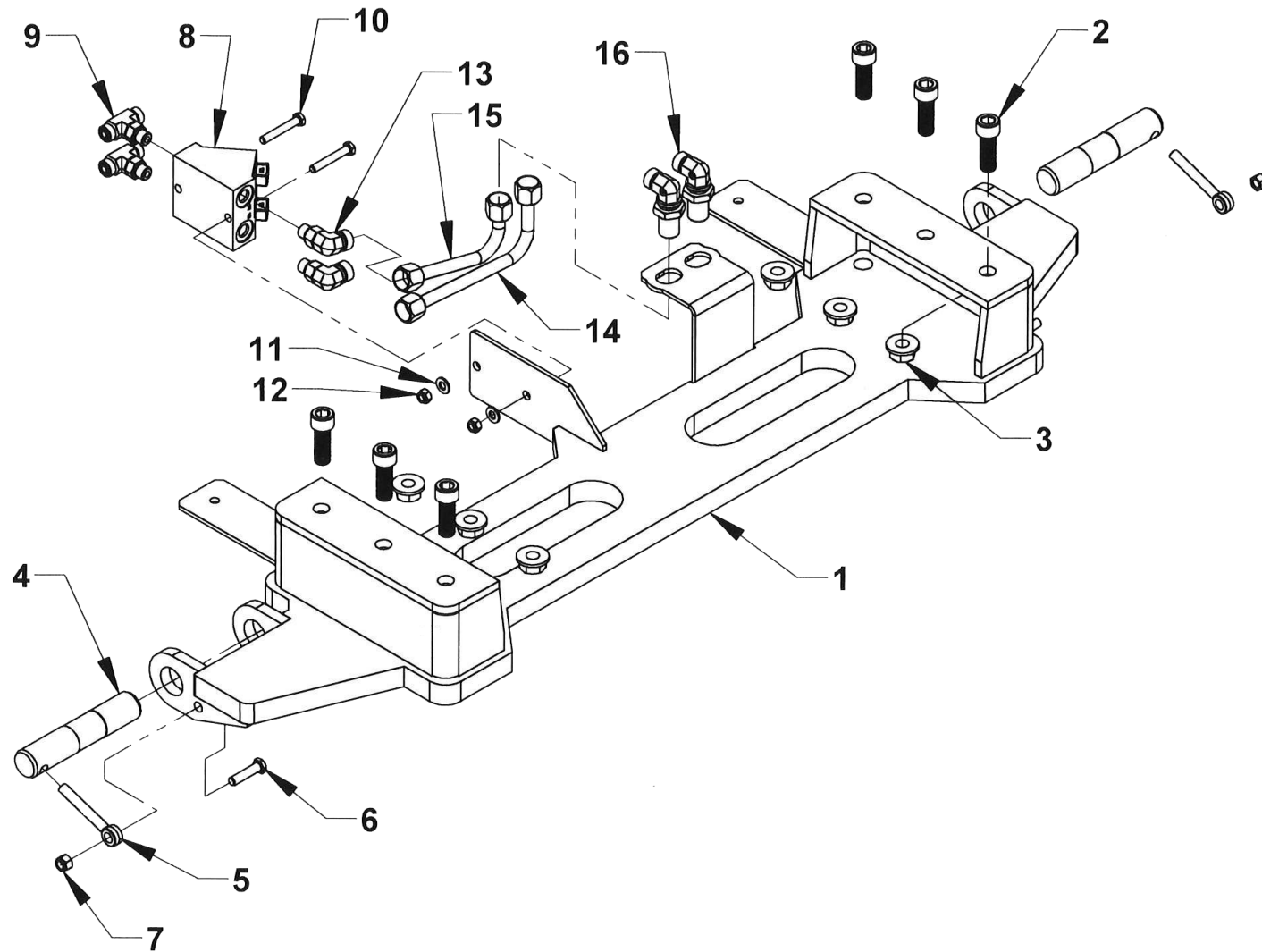
### SERIES 10 GEN2 SUBFRAME COMPONENTS ADJUSTABLE TILT CYLINDERS (con'd)

| REF | PART #             | QTY | DESCRIPTION                              |
|-----|--------------------|-----|------------------------------------------|
| 22  | 0809759L           | 1   | RIGHT APPROACH REAR BED-LOCK - LH        |
| 23  | 0809759R           | 1   | RIGHT APPROACH REAR BED-LOCK - RH        |
| 24  | 0400634            | 8   | BOLT 5/8-11 UNC x 4 HHCS GR8 ZP          |
| 25  | 0400503            | 16  | FLAT WASHER 5/8 GR8                      |
| 26  | 0400426            | 8   | NYLON LOCK NUT 5/8-11 UNC GR8 ZP         |
| 27  | 81286              | 1   | U-BOLT 3/8-16 UNC                        |
| 28  | 0400394            | 2   | HEX NUT 3/8-16 UNC                       |
| 29  | 0400480            | 4   | FLAT WASHER 3/8                          |
| 30  | 040392             | 5   | NYLON LOCK NUT 3/8-16 UNC                |
| 31  | 0403162            | 4   | BOLT 5/16-18 UNC - ALLEN COUNTERSUNK     |
| 32  | 0751223            | 1   | LCG 12/16/20 S/B CYLINDER SUPPORT PAD    |
| 33  | 0400465            | 5   | FLAT WASHER 5/16                         |
| 34  | 0400382            | 4   | NYLON LOCK NUT 5/16-18 UNC               |
| 35  | 09020735           | 1   | IGUS 200.03.055 41 LINK TRACK & BOLT KIT |
| 36  | 09020734           | 1   | IGUS 200.05.055 41 LINK TRACK & BOLT KIT |
| 37  | 07036180           | 1   | S10 SUBFRAME FLUID TUBE -LONG            |
| 38  | 07036181           | 1   | S10 SUBFRAME FLUID TUBE-SHORT            |
| 39  | ADPTR-FF2035T0808S | 2   | ADAPTER 90 90 8MORS x 8MORS              |
| 40  | 0320174-08         | 2   | RUBBER CUSHION CLAMP - 1/2               |
| 41  | 0400126            | 1   | BOLT 3/8-16 UNC x 1 HHCS ZP              |
| 42  | 03000053           | 3   | STAUFF 12.7mm TWIN PIPE CLAMP            |
| 43  | 04002948           | 3   | BOLT 5/16-18 UNC x 1-1/2 SHCS ZP         |
| 44  | 04008388           | 3   | NYLON LOCK JAM NUT 5/16-18 UNC ZP        |
| 45  | 03019743-039       | 1   | HOSE ASSEMBLY - 8FORS-H14505-8MORS       |
| 46  | 03019742-043       | 1   | HOSE ASSEMBLY - 8FORS-H14506-8MORS       |
| 47  | 03024411           | 2   | STAUFF 17.2MM LNG LIGHT CLAMP            |
| 48  | 0403018            | 2   | BOLT 1/4-20 UNC x 2 HHCS GR5 ZP          |
| 49  | 0400367            | 2   | NYLON LOCK NUT 1/4-20 UNC                |
| 50  | 07036091           | 1   | S10 TILT HOSE MOUNTING ANGLE             |
| 51  | 07036092           | 2   | S10 TILT HOSE MOUNTING BUSHING           |
| 52  | 04008408           | 2   | BOLT 3/8-16 UNC x 2 CARRIAGE             |



## Section V - PARTS

### SERIES 10 GEN2 ADJUSTABLE TILT SUBFRAME TRUNNION - 08023057



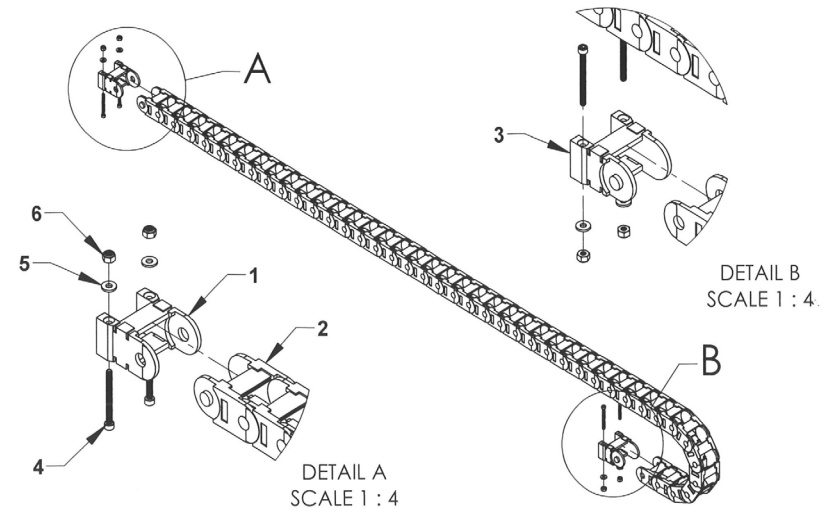
## Section V - PARTS

### ADJUSTABLE TILT SUBFRAME TRUNNION - 08023057

| REF | PART #             | QTY | DESCRIPTION                               |
|-----|--------------------|-----|-------------------------------------------|
| 1   | 08023057           | 1   | TILT CYLINDER OBT TRUNNION                |
| 2   | 04002949           | 6   | BOLT SHCS 5/8-11 UNC x 1-3/4 ZP           |
| 3   | 04001045           | 6   | NUT, FLANGE LOCK 5/8-11 UNC               |
| 4   | 13068              | 2   | TILT CYLINDER BASE KEEPER PIN 1.23 x 6.00 |
| 5   | 84680              | 2   | KEEPER PIN 3/8 ROD END                    |
| 6   | 0400132            | 2   | BOLT HHCS 3/8-16 UNC x 1-1/2              |
| 7   | 0400392            | 2   | NUT, NYLOCK 3/8-16 ZP                     |
| 8   | 74345              | 1   | COUNTERBALANCE VALVE CBCG-XVN-XEI         |
| 9   | ADPTR-FF1861T0606  | 2   | ADAPTER TEE ORGM/ORSM/ORSM 6 x 6 x 6      |
| 10  | 0400111            | 2   | BOLT HHCS 5/16-18 UNC X 2                 |
| 11  | 0400465            | 2   | FLAT WASHER 5/16 ZP                       |
| 12  | 0400382            | 2   | NUT NYLOCK 5/16-18 UNC P                  |
| 13  | ADPTR-FF1868T0806S | 2   | ADAPTER 90 ORS/ORB 8 x 6                  |
| 14  | 07036178           | 1   | ADJUSTABLE TILT CYL OBT FLUID TUBE - LONG |
| 15  | 070361179          | 1   | ADJUSTABLE TILT CYLOBT FLUID TUBE - SHORT |
| 16  | ADPTR-FF2030T0808S | 2   | ADAPTER BULKHEAD 90 8MORS x 8MORS         |

## Section V - PARTS

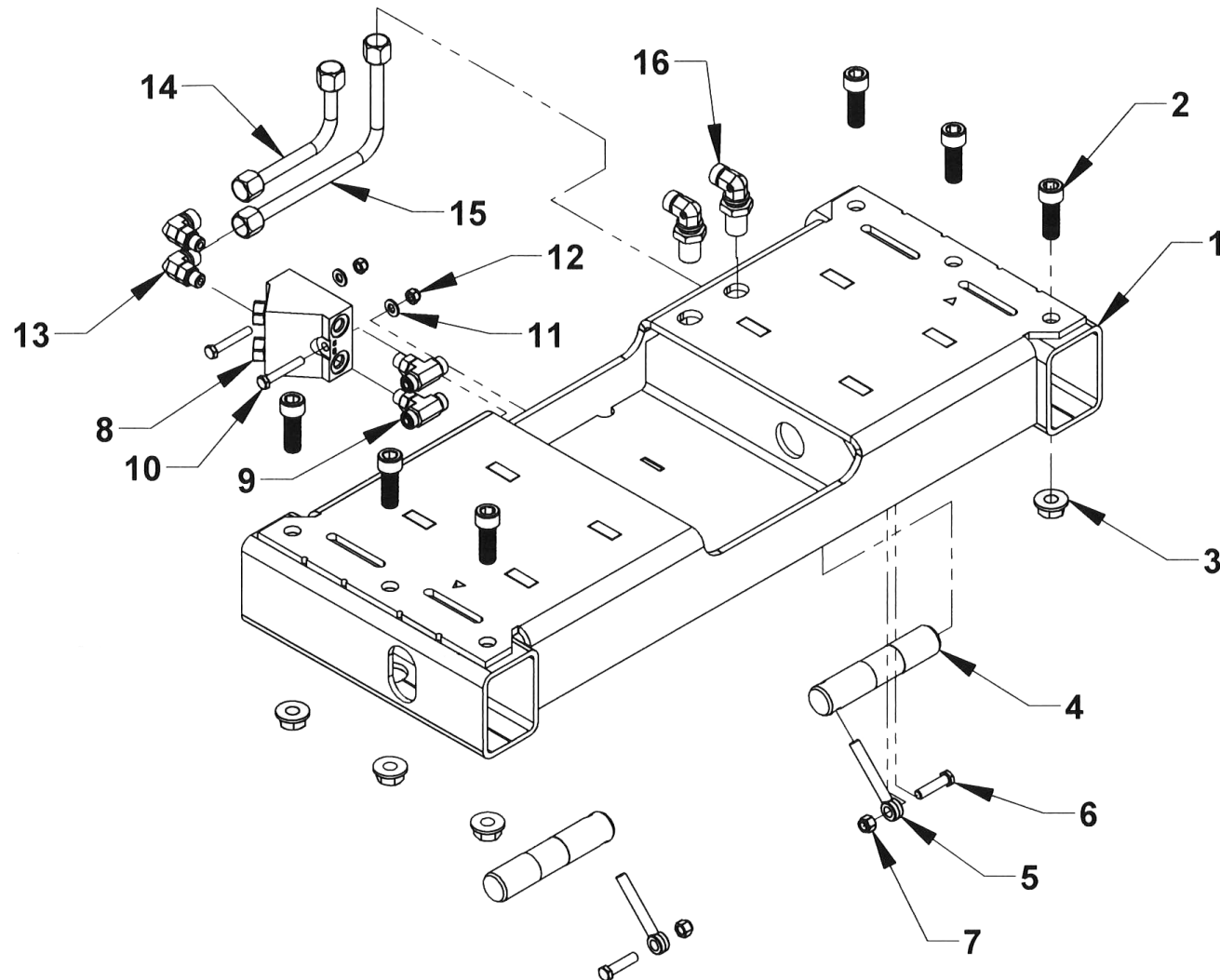
### IGUS TRACK AND BOLT KIT - 09020735 120" SLIDEBACK CYLINDER STROKE



| REF | PART #   | QTY | DESCRIPTION                              |
|-----|----------|-----|------------------------------------------|
|     | 09020735 | 1   | IGUS 200.03.055 41 LINK TRACK & BOLT KIT |
| 1   | 03017004 | 1   | IGUS 2000.03.1 END LINK - FEMALE         |
| 2   | 03005615 | 45  | IGUS 200.03.055 LINK                     |
| 3   | 03017005 | 1   | IGUS 2100.03.2 END LINK - MALE           |
| 4   | 0403165  | 4   | BOLT SHCS #10-24 UNC x 2 ZP              |
| 5   | 0400450  | 4   | FLAT WASHER #10 SAE ZP                   |
| 6   | 0400358  | 4   | NUT NYLOK #10-24 UNC ZP                  |

## Section V - PARTS

### SERIES 10 GEN2 ADJUSTABLE TILT SUBFRAME TILT CYLINDER BOX - 08023056



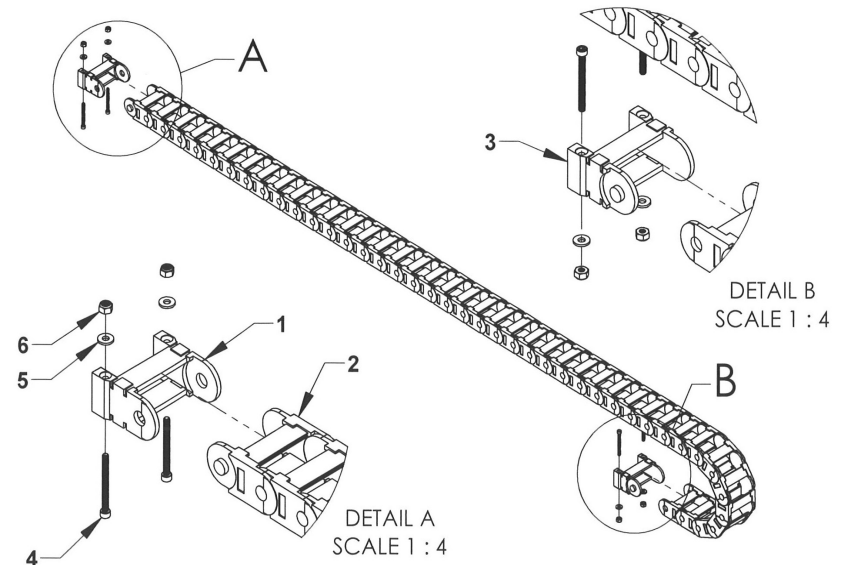
## Section V - PARTS

### ADJUSTABLE TILT SUBFRAME TILT CYLINDER BOX - 08023056

| REF | PART #             | QTY | DESCRIPTION                                |
|-----|--------------------|-----|--------------------------------------------|
| 1   | 08023056           | 1   | IBT TILT CYLINDER BOX                      |
| 2   | 04002949           | 6   | BOLT SHCS 5/8-11 UNC x 1-3/4 ZP            |
| 3   | 04001045           | 6   | NUT, FLANGE LOCK 5/8-11 UNC                |
| 4   | 13068              | 2   | TILT CYLINDER BASE KEEPER PIN 1.23 x 6.00  |
| 5   | 84680              | 2   | KEEPER PIN 3/8 ROD END                     |
| 6   | 0400132            | 2   | BOLT HHCS 3/8-16 UNC x 1-1/2               |
| 7   | 0400392            | 2   | NUT, NYLOCK 3/8-16 ZP                      |
| 8   | 74345              | 1   | COUNTERBALANCE VALVE CBCG-XVN-XEI          |
| 9   | ADPTR-FF1861T0606  | 2   | ADAPTER TEE ORGM/ORSM/ORSM 6 x 6 x 6       |
| 10  | 0400111            | 2   | BOLT HHCS 5/16-18 UNC X 2                  |
| 11  | 0400465            | 2   | FLAT WASHER 5/16 ZP                        |
| 12  | 0400382            | 2   | NUT NYLOCK 5/16-18 UNC P                   |
| 13  | ADPTR-FF1868T0806S | 2   | ADAPTER 90 ORS/ORB 8 x 6                   |
| 14  | 07023194           | 1   | ADJUSTABLE TILT CYL OBT FLUID TUBE - LONG  |
| 15  | 07023195           | 1   | ADJUSTABLE TILT CYL OBT FLUID TUBE - SHORT |
| 16  | ADPTR-FF2030T0808S | 2   | ADAPTER BULKHEAD 90 8MORS x 8MORS          |

## Section V - PARTS

### IGUS TRACK AND BOLT KIT - 09020734 120" SLIDEBACK CYLINDER STROKE



| REF | PART #   | QTY | DESCRIPTION                              |
|-----|----------|-----|------------------------------------------|
|     | 09020734 | 1   | IGUS 200.05.055 41 LINK TRACK & BOLT KIT |
| 1   | 03017002 | 1   | IGUS 2000.05.1 END LINK - FEMALE         |
| 2   | 03011188 | 41  | IGUS 200.05.055 LINK                     |
| 3   | 03017003 | 1   | IGUS 2100.05.2 END LINK - MALE           |
| 4   | 0403165  | 4   | BOLT SHCS #10-24 UNC x 2 ZP              |
| 5   | 0400450  | 4   | FLAT WASHER #10 SAE ZP                   |
| 6   | 0400358  | 4   | NUT NYLOK #10-24 UNC ZP                  |

This exploded view diagram illustrates the assembly of a mechanical device, likely a pump or motor component. The components are numbered 1 through 26. The main assembly consists of a central housing (1) with a flange (2) and a base plate (3). A motor or actuator (4) is mounted on the base plate. The assembly is secured with various fasteners, including screws (15, 16, 20, 21, 22, 23, 24, 25, 26) and washers (6, 7, 12, 13). A series of O-rings (8, 9, 10, 11) are used for sealing. A small component (14) is shown separately, along with a set of three small rectangular components (17, 18, 19). The diagram uses dashed lines to show the alignment and assembly sequence of the parts.

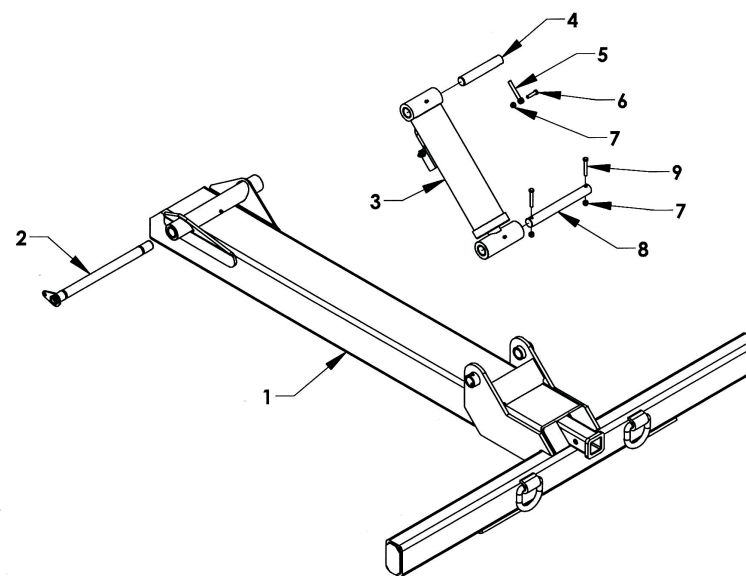
## Section V - PARTS

### TAIL LIGHT COMPONENTS

| REF | PART #   | QTY | DESCRIPTION                                   |
|-----|----------|-----|-----------------------------------------------|
| 1   | 0809517L | 1   | TAIL LIGHT HOUSING WELDMENT - LH              |
| 2   | 0809517R | 1   | TAIL LIGHT HOUSING WELDMENT - RH              |
| 3   | 0751892L | 1   | 12/16/20 LCG TAIL LIGHT HOUSING BEZEL - LH G2 |
| 4   | 0751892R | 1   | 12/16/20 LCG TAIL LIGHT HOUSING BEZEL - RH G2 |
| 5   | 0750672  | 2   | WORK LIGHT MOUNTING BRACKET                   |
| 6   | 0311516  | 2   | 2-1/2 IN. MARKER LIGHT GROMMET                |
| 7   | 0311512  | 2   | 2-1/2 IN. RED MARKER LIGHT                    |
| 8   | 0311503  | 4   | 6 IN. OVAL GROMMET                            |
| 9   | 0311498  | 4   | 6 IN. OVAL RED LIGHT                          |
| 10  | 0311511  | 2   | CARRIER TAIL LIGHT GROMMET                    |
| 11  | 0311510  | 2   | CARRIER BACK UP LIGHT                         |
| 12  | 0311528  | 1   | BACK UP ALARM GROMMET                         |
| 13  | 0306385  | 1   | BACK UP ALARM                                 |
| 14  | 0311525  | 1   | LICENSE PLATE LIGHT                           |
| 15  | 0306113  | 2   | TAIL LIGHT WIRE GROMMET                       |
| 16  | 0400126  | 4   | BOLT, HHCS 3/8-16 UNC x 1                     |
| 17  | 0402111  | 14  | LOCK WASHER - 1/4 SAE SS                      |
| 18  | 0400071  | 12  | SCREW 1/4-20 UNC x 3/4 RD HD PHIL SS          |
| 19  | 0400371  | 12  | "U" NUT 1/4-20 UNC                            |
| 20  | 0403053  | 8   | BOLT, CARRIAGE 3/8-16 UNC x 1-1/4 SS          |
| 21  | 0402121  | 12  | LOCK WASHER - 3/8 SAE SS                      |
| 22  | 0402122  | 12  | HEX NUT 3/8-16 UNC SS                         |
| 23  | 0402021  | 2   | BOLT, HHCS 1/4-20 UNC x 1 SS                  |
| 24  | 0403052  | 2   | NYLON LOCK NUT 1/4-20 UNC SS                  |
| 25  | 0402110  | 4   | FLAT WASHER 1/4 SAE SS                        |
| 26  | 0400366  | 2   | JAM NUT 1/4-20 UNC                            |

## Section V- PARTS

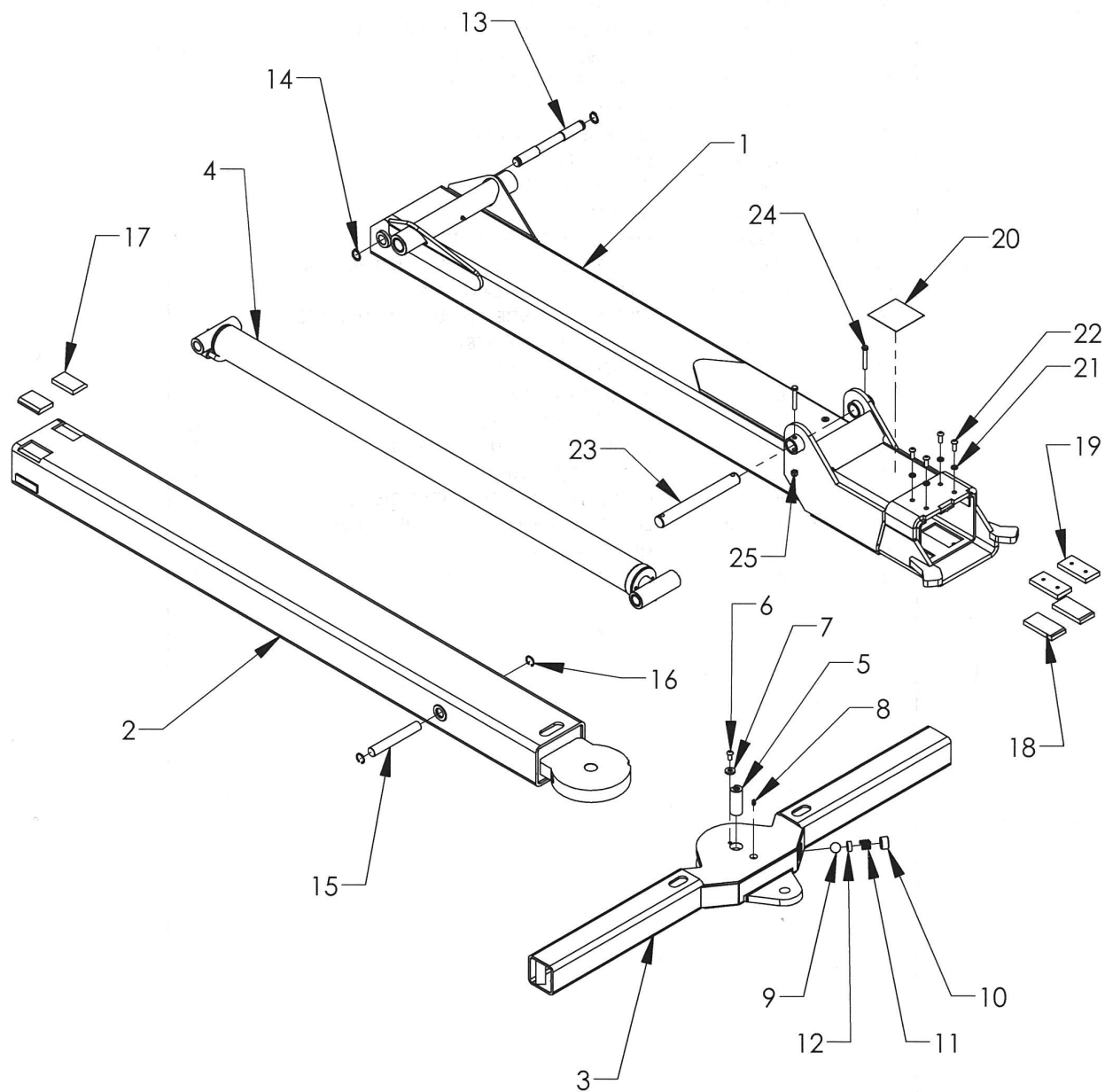
### DOCK STABILIZER



| REF | PART #       | QTY | DESCRIPTION                    |
|-----|--------------|-----|--------------------------------|
| 1   | 0810010-10   | 1   | DOCK STABILIZER WELDMENT       |
| 2   | 0809411U     | 1   | WHEEL LIFT BOOM HINGE PIN      |
| 3   | 0308372-1175 | 1   | DOCK STABILIZER CYL. 4 x 11.75 |
| 4   | 0750562      | 1   | EURO SCL LIFT CYL MTG PIN-BASE |
| 5   | 84680        | 1   | KEEPER PIN 3/8 ROD END         |
| 6   | 0400132      | 1   | BOLT HHCS, 3/8-16 UNC x 1-1/2  |
| 7   | 0400392      | 2   | NYLON LOCK NUT 3/8-16 ZP       |
| 8   | 0750523      | 1   | WHEEL LIFT REAR MTG PIN        |
| 9   | 0400150      | 2   | BOLT HHCS 3/8-16 UNC x 2-1/2   |

**Section V - PARTS**

**3,000 LB.WHEEL LIFT  
GEN 2 SERIES 10**

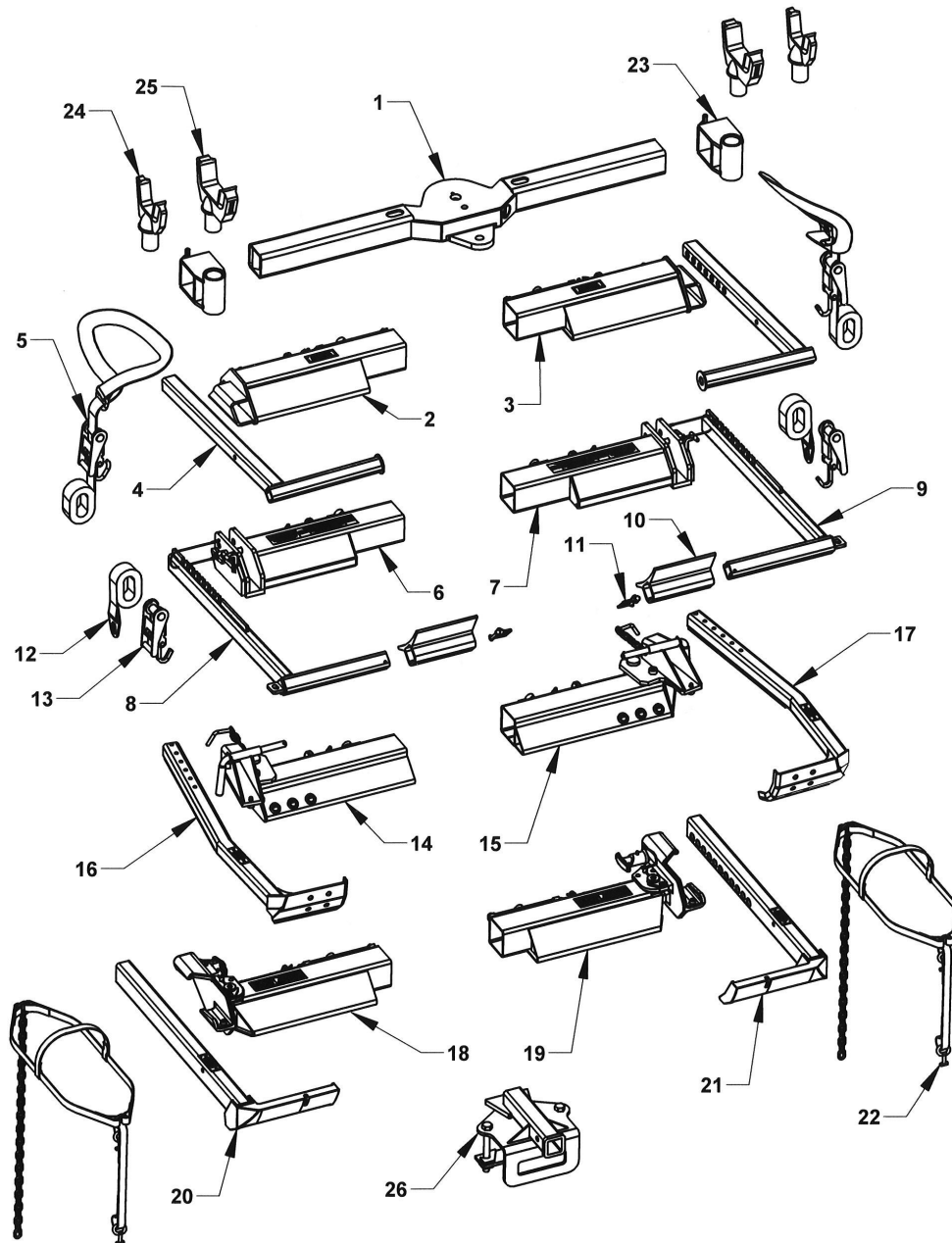


**Section V - PARTS****3,000 LB. WHEEL LIFT - GEN 2 - 0940450**

| REF | PART #   | QTY | DESCRIPTION                         |
|-----|----------|-----|-------------------------------------|
| 1   | 10240408 | 1   | UNDERLIFT OUTER BOOM TUBE - 4K      |
| 2   | 0811159  | 1   | UNDERLIFT INNER BOOM TUBE - 4K      |
| 3   | 0811160  | 1   | CROSSBAR 4K                         |
| 4   | 72A30054 | 1   | UNDERLIFT EXTEND CYLINDER 3 x 54    |
| 5   | 0940433  | 1   | CROSSBAR PIVOT PIN                  |
| 6   | 0403004  | 1   | CAP SCREW BUTTON HD 3/8-16 x 54     |
| 7   | 0720463  | 1   | WASHER                              |
| 8   | 0300113  | 1   | GREASE FITTING 1/4-28               |
| 9   | 0308129  | 1   | DETENT BALL                         |
| 10  | 0308130  | 1   | DETEND PLUG                         |
| 11  | 0308131  | 1   | DETENT SPRING                       |
| 12  | 07003396 | 1   | SPACER CROSSBAR DETENT              |
| 13  | 729352   | 1   | EXTEND CYLINDER MOUNTING PIN-BASE   |
| 14  | 86100E   | 2   | SNAP-RING 1.00 EXTERNAL HD          |
| 15  | 72940    | 1   | EXTEND CYLINDER MOUNTING PIN-ROD    |
| 16  | 86100I   | 2   | SNAP-RING 1.00 INTERNAL             |
| 17  | 65613    | 2   | WEAR PAD 1/2 x 2 x 3                |
| 18  | 63595    | 2   | WEAR PAD 1/2 x 2 x 4                |
| 19  | 63595H   | 2   | SPACER PAD 1/2 x 2 x 4              |
| 20  | 0540042  | 1   | UNDERLIFT RATING PLATE 3K           |
| 21  | 0400482  | 4   | 3/8 LOCK WASHER                     |
| 22  | 0403139  | 4   | CAP SCREW BUTTON HEAD 3/8-16 x 1    |
| 23  | 0750523  | 1   | LIFT CYLINDER MTG PIN 1.25 x 11.062 |
| 24  | 0400150  | 2   | HHCS 3/8-16 x 2-1/2                 |
| 25  | 0400392  | 2   | NYLON LOCK NUT 3/8-16               |



**Section V - PARTS**  
**WHEEL-LIFT CROSSBAR ATTACHMENTS**



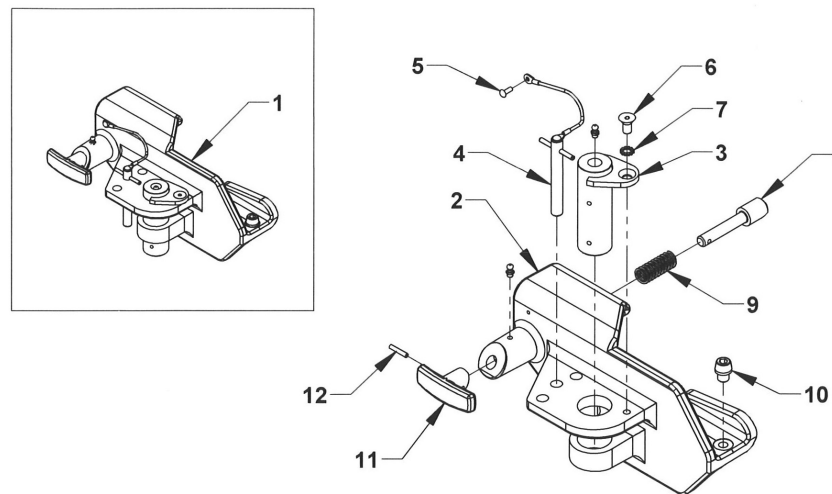
## Section V - PARTS

### WHEEL LIFT CROSSBAR ATTACHMENTS

| REF | PART #   | QTY | DESCRIPTION                            |
|-----|----------|-----|----------------------------------------|
| 1   | 0811160  | 1   | CROSSBAR 4K (3.5 x 3.5)                |
| 2   | 0909498L | 1   | 4-INCH WHEEL GRID - LH                 |
| 3   | 0909498R | 1   | 4-INCH WHEEL GRID - RH                 |
| 4   | 08006748 | 2   | STEEL L-ARM 4000 LB                    |
| 5   | 0308664  | 2   | STRAP AND RATCHET PIVOT ASSEMBLY       |
| 6   | 0940434L | 1   | WHEEL GRID (DROP-IN L-ARM) - LH        |
| 7   | 0940434R | 1   | WHEEL GRID (DROP-IN L-ARM) - RH        |
| 8   | 65250L   | 1   | 4000 LB L-ARM - LH                     |
| 9   | 65250R   | 1   | 4000 LB L-ARM - RH                     |
| 10  | 65245    | 2   | REMOVABLE PAN (CHEVRON)                |
| 11  | 84911    | 2   | SAFETY PIN, 5/16 (CHERON)              |
| 12  | 65285    | 2   | WHEEL STRAP WITH D-RING                |
| 13  | 65280A   | 2   | RATCHET AND HOOK                       |
| 14  | 8800800  | 1   | LH WHEEL GRID                          |
| 15  | 8800900  | 1   | RH WHEEL GRID                          |
| 16  | 8700190  | 1   | LH WHEEL RETAINER                      |
| 17  | 8700180  | 1   | RH WHEEL RETAINER                      |
| 18  | 0909499L | 1   | WHEEL GRID 3WP - LH                    |
| 19  | 0909499R | 1   | WHEEL GRID 3WP - RH                    |
| 20  | 0904156  | 1   | 3-WAY PIVOT L-ARM - LH                 |
| 21  | 0903649  | 1   | 3-WAY PIVOT L-ARM - RH                 |
| 22  | 0902382  | 2   | 1 INCH NYLON POLY COAT BASKET STRAP    |
|     | 65287    | 2   | BASKET TIRE STRAP - MEDIUM-LARGE, BLUE |
| 23  | 65460    | 2   | 3-1/2 INCH FORK HOLDER                 |
| 24  | 663530   | 2   | FRAME FORK, 3 INCH CAST                |
| 25  | 663545   | 2   | FRAME FORK SHORT, 4-1/2 INCH CAST      |
| 26  | 0940458  | 1   | REESE HITCH RECEIVER, COMMON GEN2      |

## Section V - PARTS

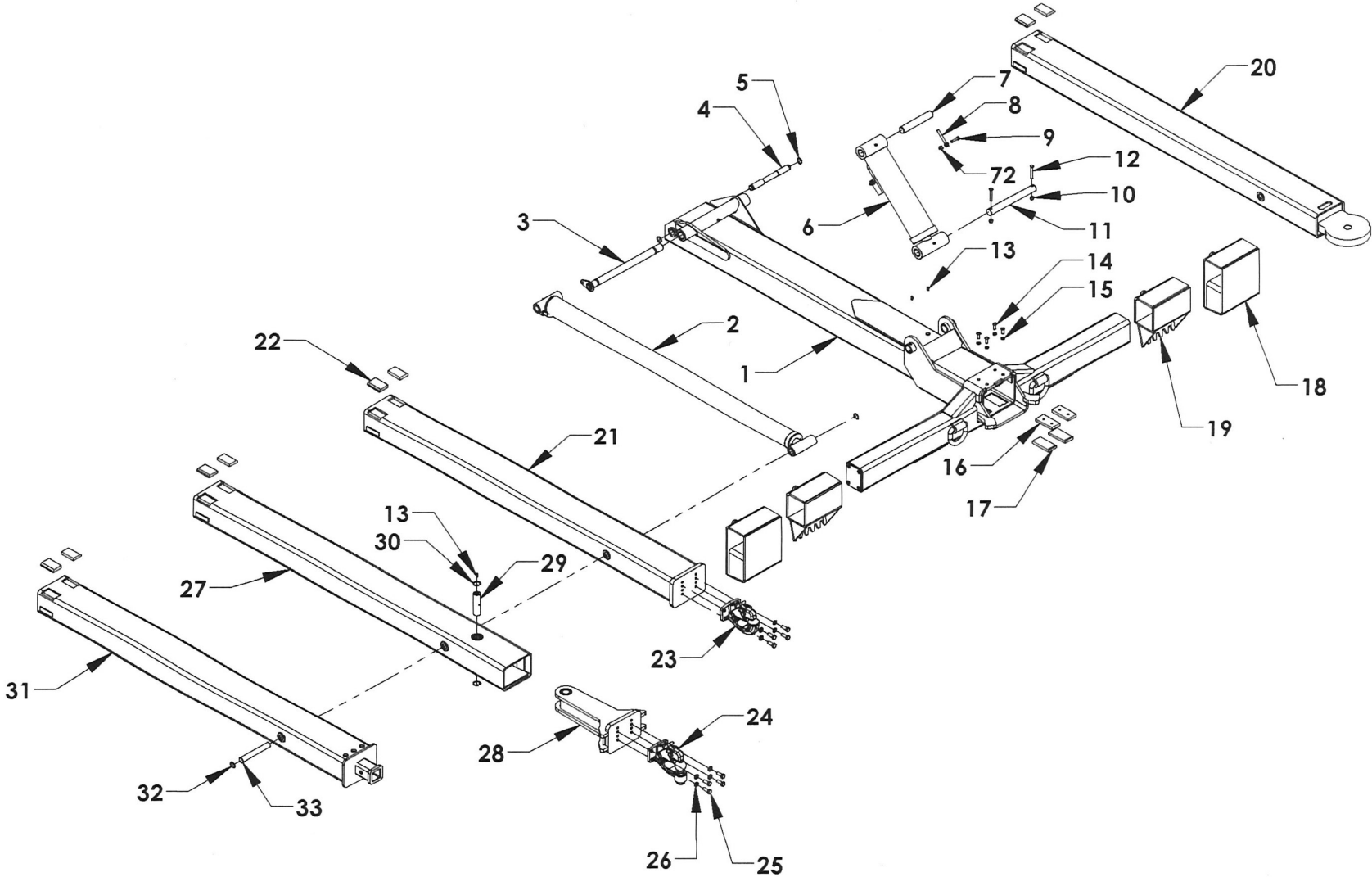
### PIVOT L-ARM RECEIVER GROUP



| REF | PART #                        | QTY | DESCRIPTION                                                            |
|-----|-------------------------------|-----|------------------------------------------------------------------------|
| 1   | 09007328L<br>09007328R        | 1   | PIVOT L-ARM RECEIVER GROUP - LH<br>PIVOT L-ARM RECEIVER GROUP - RH     |
| 2   | 0719079<br>0719080            | 1   | PIVOT L-ARM RECEIVER CASTING - LH<br>PIVOT L-ARM RECEIVER CASTING - RH |
| 3   | 0802187                       | 1   | L-ARM RECEIVER CASTING PIVOT PIN                                       |
| 4   | 0904744<br>0714415<br>0303918 | 1   | PIN ASSEMBLY<br>PIVOT LOCK PIN<br>LANYARD                              |
| 5   | 0400044                       | 1   | DRIVE SCREW #10-24 x 1/2 ROUND HEAD                                    |
| 6   | 0400349                       | 1   | SCREW 3/8-16 x 1/2 FHSC                                                |
| 7   | 0400481                       | 1   | LOCK WASHER 3/8 EXTERNAL TOOTH                                         |
| 8   | 0707505                       | 1   | 7/8 CAM PIN                                                            |
| 9   | 0302641                       | 1   | CAM PIN SPRING                                                         |
| 10  | 0712933                       | 1   | SCREW 1/2-13 x 1/2 TAPERED SOCKET CAP                                  |
| 11  | 0302648                       | 1   | T-HANDLE                                                               |
| 12  | 0400559                       | 1   | ROLL PIN 3/16 -1                                                       |

Section V - PARTS

3,000 LB. UNDERLIFTS  
GEN 2 SERIES 10

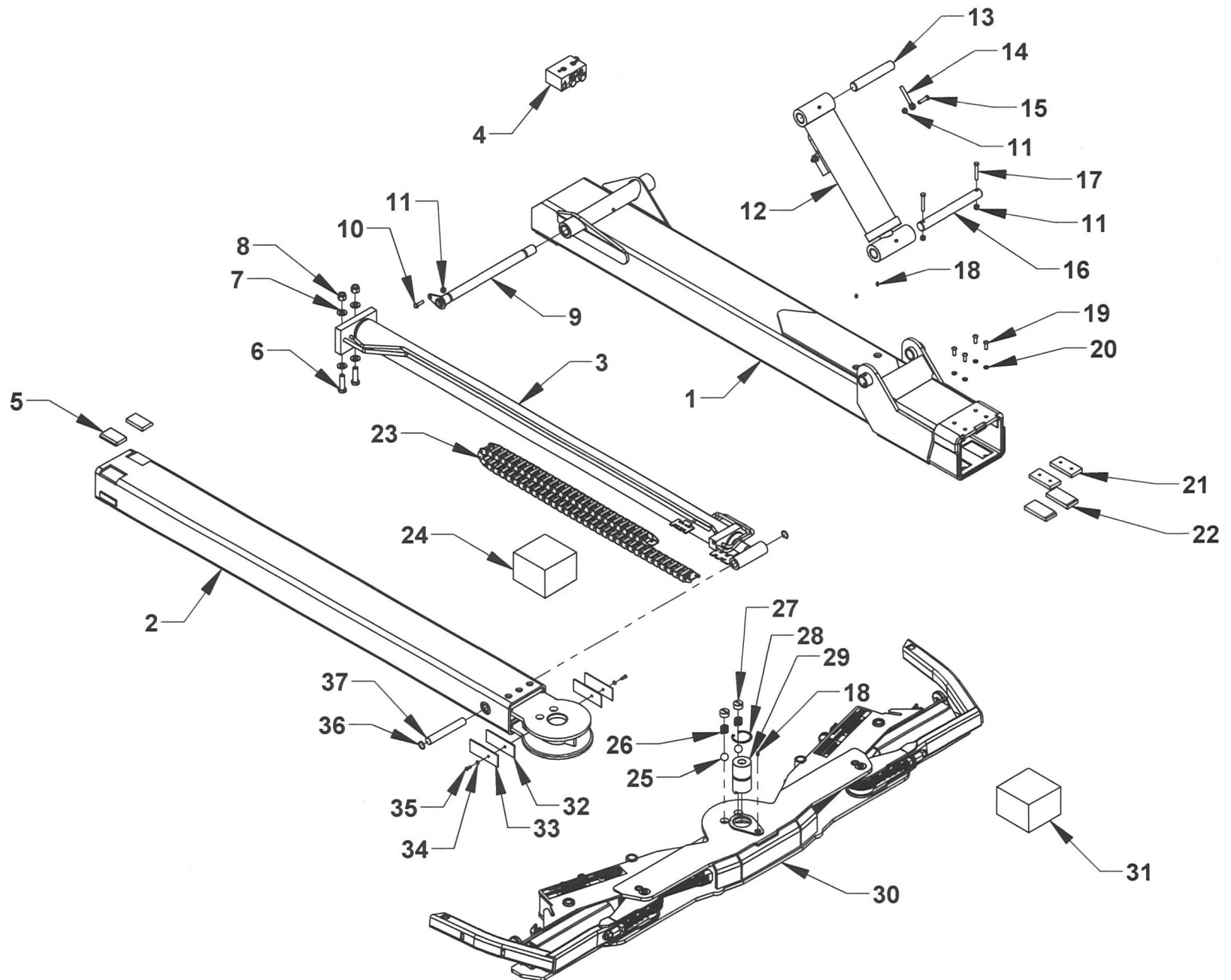


## Section V - PARTS

### 3,000 LB. UNDERLIFT - GEN 2

| REF | PART #       | QTY | DESCRIPTION                                  |
|-----|--------------|-----|----------------------------------------------|
| 1   | 10240408DS   | 1   | UNDERLIFT OUTER BOOM TUBE                    |
| 2   | 72A30054     | 1   | WL EXTEND CYLINDER 3.0 BORE x 54 STROKE      |
| 3   | 0809411U     | 1   | WHEEL LIFT BOOM HINGE PIN                    |
| 4   | 729352       | 1   | PIN - WHEEL LIFT EXTEND CYLINDER BASE        |
| 5   | 86100E       | 2   | SNAP RING 1' EXTERNAL                        |
| 6   | 0308372-1175 | 1   | DOCK STABILIZER CYL. 4.0 BORE x 11.75 STROKE |
| 7   | 0750562      | 1   | EURO SCL LIFT CYL MOUNTING PIN-BASE          |
| 8   | 84680        | 1   | KEEPER PIN 3/8 ROD END                       |
| 9   | 0400132      | 1   | BOLT, HHCS 3/8-16 UNC x 1-1/2                |
| 10  | 0400392      | 3   | NYLON LOCK NUT 3/8-16 UNC                    |
| 11  | 0750523      | 1   | WHEEL LIFT REAR MOUNTING PIN                 |
| 12  | 0400150      | 2   | BOLT, HHCS 3/8-16 UNC x 2-1/2                |
| 13  | 7B130        | 3   | GREASE FITTING 1/4-28                        |
| 14  | 0403139      | 4   | BOLT, BHCS 3/8-16 UNC x 1                    |
| 15  | 0400482      | 4   | LOCK WASHER 3/8                              |
| 16  | 63595H       | 4   | WEAR PAD NYLATRON NSM 1/2 x 2 x 4 W/HOLES    |
| 17  | 63595        | 4   | WEAR PAD NYLATRON NSM 1/2 x 2 x 4            |
| 18  | 0809898-54   | 2   | DOCK STABILIZER EXTENSION STAND (OPT)        |
| 19  | 0809646-54   | 2   | DOCK STABILIZER SPADE (OPT)                  |
| 20  | 0811159      | 1   | 4K UNDERLIFT INNER BOOM TUBE                 |
| 21  | 10244P       | 1   | 4K UNDERLIFT INNER PINTLE BOOM TUBE          |
| 22  | 65613        | 2   | WEAR PAD 1/2 x 2 x 3 NSM BEVELED             |
| 23  | A3020H       | 1   | PINTLE HOOK                                  |
| 24  | A3020        | 1   | PINTLE BALL                                  |
| 25  | 0400177      | 4   | BOLT, HHCS 1/2-13 UNC x 1-1/4                |
| 26  | 0400491      | 4   | WASHER 1/2 LOCK                              |
| 27  | 102404-PP    | 1   | 4K INNER BOOM-PIVOTING PINTLE                |
| 28  | 143355       | 1   | PIVOTING PINTLE HEAD WELDMENT - 4K           |
| 29  | 143142PP     | 1   | PIN - PIVOTING PINTLE HEAD 4K                |
| 30  | 86125I       | 2   | SNAP RING 1-1/4 INTERNAL                     |
| 31  | 10244R       | 1   | 4K INNER BOOM - REESE RECEIVER               |
| 32  | 86100I       | 2   | SNAP RING 1" INTERNAL                        |
| 33  | 72940        | 1   | CYLINDER PIN                                 |

**Section V- PARTS**  
**AUTOGRIP WHEEL LIFT**

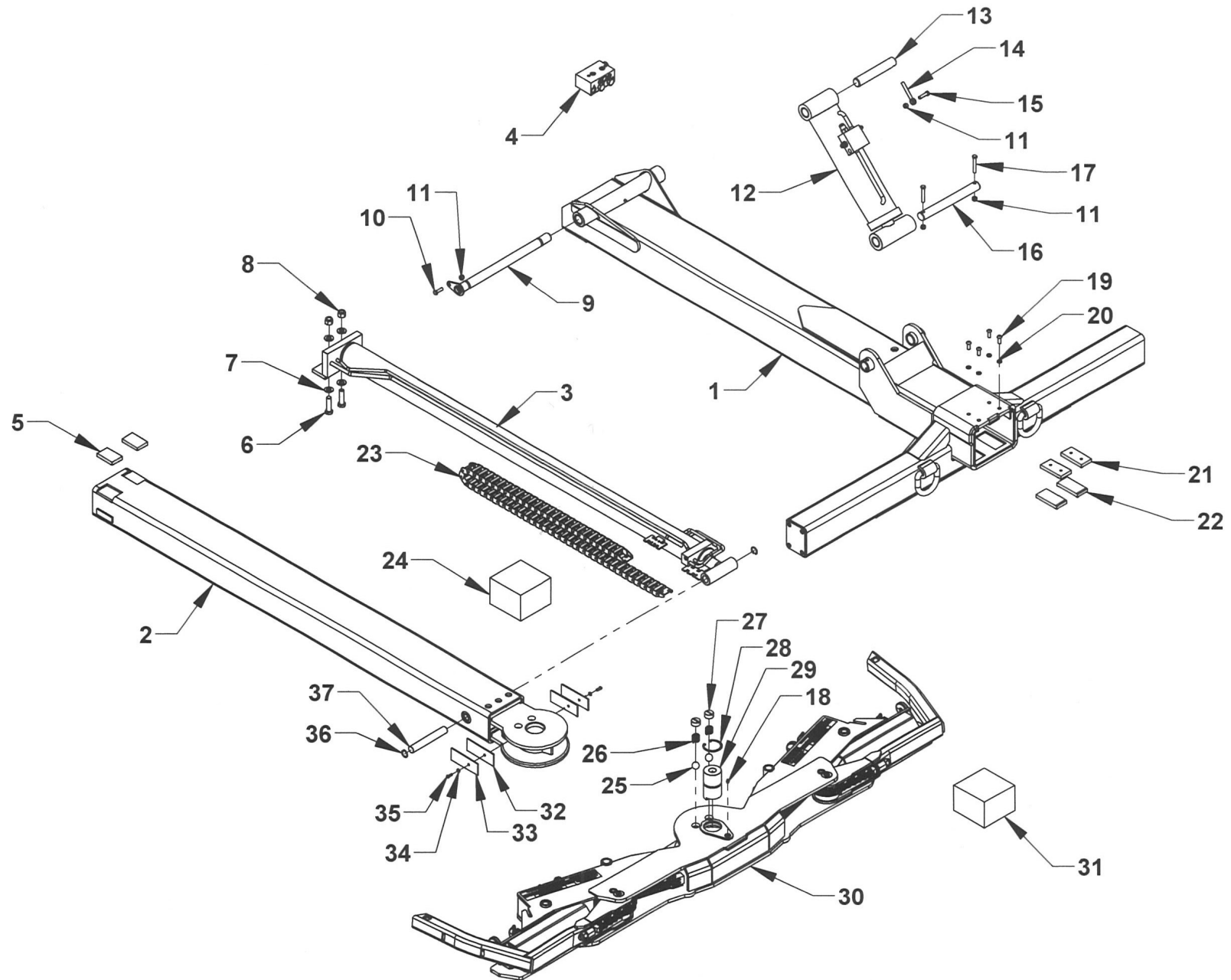


## Section V - PARTS

### AUTOGRIP WHEEL LIFT

| REF | PART #       | QTY | DESCRIPTION                               |
|-----|--------------|-----|-------------------------------------------|
| 1   | 10270410     | 1   | AUTOGRIP OUTER BOOM TUBE - 4K             |
| 2   | 08021745     | 1   | AUTOGRIP INNER TUBE GEN2                  |
| 3   | 72136        | 1   | AUTOGRIP EXTEND CYLINDER - CARRIER        |
| 4   | 74341        | 1   | FLOW DIVIDER COUNTER BALANCE VALVE        |
| 5   | 65613        | 2   | WEAR PAD 1/2 x 2 x 3 NSM BEVELED          |
| 6   | 0403141      | 2   | BOLT, HHCS 5/8-11 UNC x 2-1/4             |
| 7   | 0400505      | 4   | FLAT WASHER 5/8                           |
| 8   | 0400421      | 2   | NYLON LOCK NUT 5/8-11 UNC                 |
| 9   | 0809411U     | 1   | WHEEL LIFT BOOM HINGE PIN                 |
| 10  | 0400122      | 1   | BOLT HHCS 3/8-16 UNC x 1-1/4              |
| 11  | 0400392      | 4   | NYLON LOCK NUT 3/8-16 UNC                 |
| 12  | 0308372-1175 | 1   | LIFT CYLINDER 4 x 1.75 x 11.75            |
| 13  | 0750562      | 1   | LIFT CYLINDER MOUNTING PIN BASE           |
| 14  | 84680        | 1   | KEEPER PIN 3/8 ROD END                    |
| 15  | 0400132      | 1   | BOLT 3/8-16 UNC x 1-1/2                   |
| 16  | 0750523      | 1   | LIFT CYLINDER MOUNTING PIN ROD            |
| 17  | 0400150      | 2   | BOLT, HHCS 3/8-16 UNC x 2-1/2             |
| 18  | 0300113      | 3   | GREASE FITTING 1/4-28 UNF                 |
| 19  | 0403139      | 4   | BOLT BHCS 3/8-16 UNC x 1                  |
| 20  | 0400482      | 4   | LOCK WASHER 3/8                           |
| 21  | 63595H       | 2   | WEAR PAD NYLATRON NSM 1/2 x 2 x 4 W/HOLES |
| 22  | 63595        | 2   | WEAR PAD NYLATRON NSM 1/2 x 2 x 4         |
| 23  | 69757        | 1   | AUTOGRIP HOSE TRACK 58 LINKS              |
| 24  | 75048        | 1   | HOSE KIT IGUS TRACK                       |
| 25  | 0308129      | 2   | BALL CHROME 1 IN. (GRADE 16/25)           |
| 26  | 0300066      | 2   | AUTOGRIP DETENT SPRING GEN2               |
| 27  | 643272       | 2   | AUTOGRIP DETENT SCREW GEN2                |
| 28  | 86250I       | 1   | SNAP RING 2-1/2 INTERNAL                  |
| 29  | 644402       | 1   | AUTOGRIP CROSSBAR PIVOT PIN GEN2          |
| 30  | 644002CA     | 1   | AUTOGRIP CROSSBAR GEN2                    |
| 31  | 75048C       | 1   | HOSE KIT ARM CYLINDERS                    |
| 32  | 64304R       | 2   | RUBBER GASKET FOR 64304C                  |
| 33  | 64304C       | 2   | HOSE CLAMP FOR SIDE OF AUTOGRIP II YOKE   |
| 34  | 0400452      | 2   | LOCK WASHER 1/4                           |
| 35  | 0403142      | 2   | BOLT BHCS 1/4-20 x 3/4                    |
| 36  | 86100I       | 2   | SNAP RING 1" INTERNAL                     |
| 37  | 72940        | 1   | CYLINDER PIN 0.980 x 6-5/8                |

**Section V- PARTS**  
**AUTOGRIP DOCK STABILIZER WHEEL LIFT**





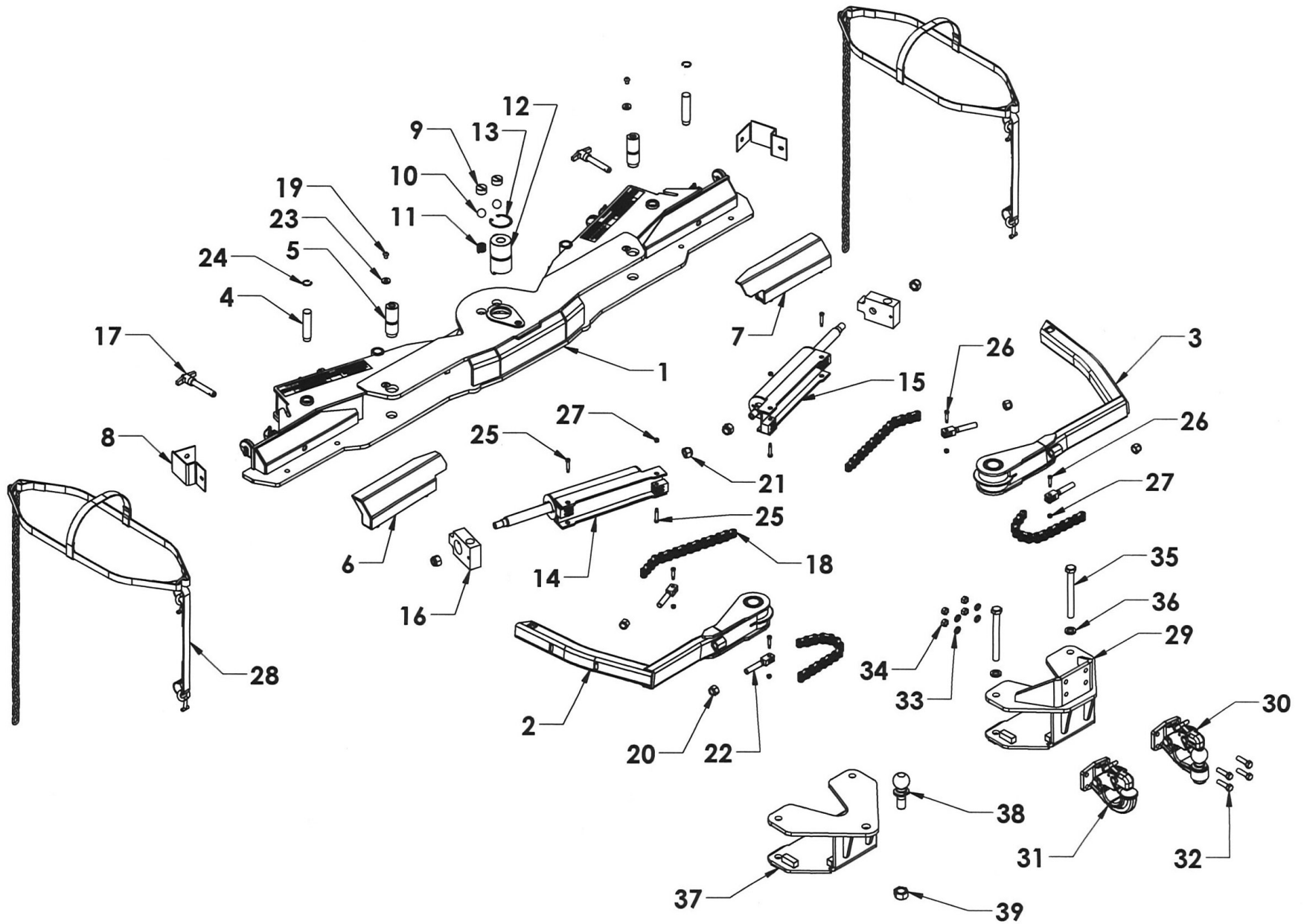
## Section V - PARTS

### AUTOGRIP DOCK STABILIZER WHEEL LIFT

| REF | PART #       | QTY | DESCRIPTION                                   |
|-----|--------------|-----|-----------------------------------------------|
| 1   | 08017875     | 1   | DOCK STABILIZER AUTOGRIP OUTER BOOM TUBE - 4K |
| 2   | 08021745     | 1   | AUTOGRIP INNER TUBE GEN3                      |
| 3   | 72136        | 1   | AUTOGRIP EXTEND CYLINDER - CARRIER            |
| 4   | 74341        | 1   | FLOW DIVIDER COUNTER BALANCE VALVE            |
| 5   | 65612        | 2   | WEAR PAD 1/2 x 2 x 3 NSM                      |
| 6   | 0403141      | 2   | BOLT, HHCS 5/8-11 UNC x 2-1/4                 |
| 7   | 0400505      | 4   | FLAT WASHER 5/8                               |
| 8   | 0400421      | 2   | NYLON LOCK NUT 5/8-11 UNC                     |
| 9   | 0809411U     | 1   | WHEEL LIFT BOOM HINGE PIN                     |
| 10  | 0400122      | 1   | BOLT HHCS 3/8-16 UNC x 1-1/4                  |
| 11  | 0400392      | 4   | NYLON LOCK NUT 3/8-16 UNC                     |
| 12  | 0308372-1175 | 1   | LIFT CYLINDER 4 x 1.75 x 11.75                |
| 13  | 0750562      | 1   | LIFT CYLINDER MOUNTING PIN BASE               |
| 14  | 84680        | 1   | KEEPER PIN 3/8 ROD END                        |
| 15  | 0400132      | 1   | BOLT 3/8-16 UNC x 1-1/2                       |
| 16  | 0750523      | 1   | LIFT CYLINDER MOUNTING PIN ROD                |
| 17  | 0400150      | 2   | BOLT, HHCS 3/8-16 UNC x 2-1/2                 |
| 18  | 0300113      | 3   | GREASE FITTING 1/4-28 UNF                     |
| 19  | 0403139      | 4   | BOLT BHCS 3/8-16 UNC x 1                      |
| 20  | 0400482      | 4   | LOCK WASHER 3/8                               |
| 21  | 63595H       | 2   | WEAR PAD NYLATRON NSM 1/2 x 2 x 4 W/HOLES     |
| 22  | 63595        | 2   | WEAR PAD NYLATRON NSM 1/2 x 2 x 4             |
| 23  | 69757        | 1   | AUTOGRIP HOSE TRACK 58 LINKS                  |
| 24  | 75048        | 1   | HOSE KIT IGUS TRACK                           |
| 25  | 0308129      | 2   | BALL CHROME 1 IN. (GRADE 16/25)               |
| 26  | 0300066      | 2   | AUTOGRIP DETENT SPRING GEN2                   |
| 27  | 643272       | 2   | AUTOGRIP DETENT SCREW GEN2                    |
| 28  | 86250I       | 1   | SNAP RING 2-1/2 INTERNAL                      |
| 29  | 644402       | 1   | AUTOGRIP CROSSBAR PIVOT PIN GEN2              |
| 30  | 644002CA     | 1   | AUTOGRIP CROSSBAR GEN2                        |
| 31  | 75048C       | 1   | HOSE KIT ARM CYLINDERS                        |
| 32  | 64304R       | 2   | RUBBER GASKET FOR 64304C                      |
| 33  | 64304C       | 2   | HOSE CLAMP FOR SIDE OF AUTOGRIP II YOKE       |
| 34  | 0400452      | 2   | LOCK WASHER 1/4                               |
| 35  | 0403142      | 2   | BOLT BHCS 1/4-20 x 3/4                        |
| 36  | 86100I       | 2   | SNAP RING 1" INTERNAL                         |
| 37  | 72940        | 1   | CYLINDER PIN 0.980 x 6-5/8                    |



**Section V - PARTS**  
**AUTOGRIP II COMPONENTS**

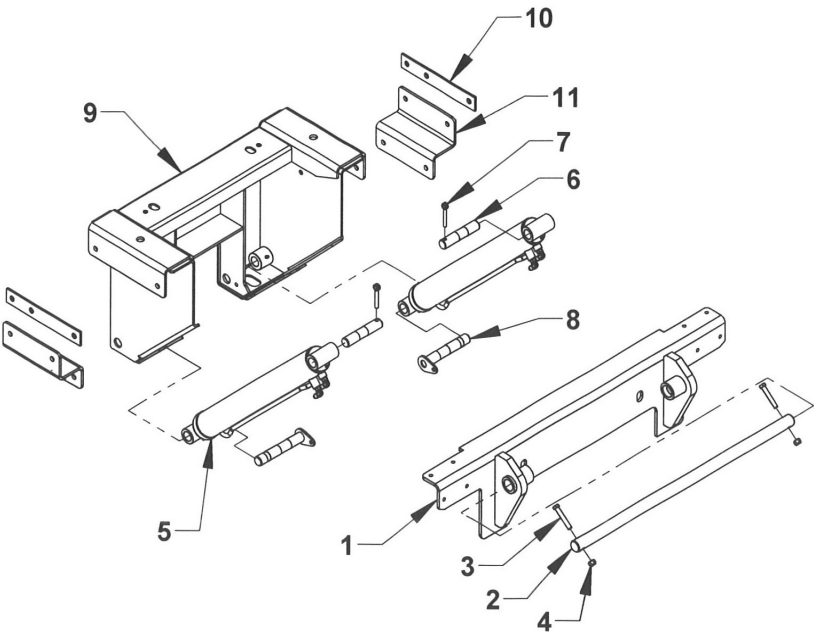


## Section V - PARTS

### AUTOGRIP II COMPONENTS

| REF | PART #    | QTY | DESCRIPTION                            |
|-----|-----------|-----|----------------------------------------|
| 1   | 644002    | 1   | CROSSBAR WELDMENT                      |
| 2   | 644352CL  | 1   | WHEEL RETAINER - LH                    |
| 3   | 644352CR  | 1   | WHEEL RETAINER - RH                    |
| 4   | 644432    | 2   | WHEEL RETAINER CYLINDER PIN            |
| 5   | 644452    | 2   | ARM PIVOT PIN                          |
| 6   | 697402L   | 1   | WHEEL SPACER - LH                      |
| 7   | 697402R   | 1   | WHEEL SPACER - RH                      |
| 8   | 644292    | 2   | HOSE GUARD                             |
| 9   | 643272    | 2   | SCREW-PLUG CROSSBAR DETENT             |
| 10  | 0308129   | 2   | BALL CHROME 1" (GRADE 16/25)           |
| 11  | 03000066  | 2   | AUTOGRIP GEN2 DETENT SPRING            |
| 12  | 644402    | 1   | CROSSBAR PIN                           |
| 13  | 862501    | 1   | SNAP RING 2.500 INCH INTERNAL          |
| 14  | 720152L   | 2   | WHEEL RETAINER CYLINDER - LH           |
| 15  | 720152R   | 2   | WHEEL RETAINER CYLINDER - RH           |
| 16  | 727162    | 2   | L-ARM CYLINDER END BLOCK               |
| 17  | 84291     | 2   | T-PIN 5/8 x 3                          |
| 18  | 87440     | 4   | AUTOGRIP ARM CHAIN                     |
| 19  | 0403140   | 2   | BOLT HGCS 3/8-16 UNC x 1/2             |
| 20  | 0400421   | 4   | 5/8-11 NYLON LOCK NUT                  |
| 21  | 0400430   | 4   | 3/4-10 NYLON LOCK NUT                  |
| 22  | 64441     | 4   | CHAIN CLEVIS                           |
| 23  | 0720463   | 2   | WASHER PIVOT PIN RETAINER - 3/8        |
| 24  | 861001    | 2   | SNAP-RING 1.000 INCH INTERNAL          |
| 25  | 0403163   | 4   | BOLT SHCS 5/16 x 1-1/4 SHOULDER 1/4-20 |
| 26  | 0403164   | 4   | BOLT SHCS 5/16 x 1 SHOULDER 1/4-20     |
| 27  | 0400367   | 8   | NYLON LOCK NUT 1/4-20                  |
| 28  | 0902382   | 2   | 1 INCH NYLON POLY COAT BASKET STRAP    |
|     | 65287     |     | BLUE BASKET TIRE STRAP - TRUCK (OPT)   |
| 29  | 694520    | 1   | AUTOGRIP PINTLE ADAPTOR (OPTIONAL)     |
| 30  | 174017159 | 1   | PINTLE BALL ATTACHMENT (OPTIONAL)      |
| 31  | 174017156 | 1   | PINTLE HOOK ATTACHMENT (OPTIONAL)      |
| 32  | 0403058   | 4   | BOLT, HHCS 1/2-13 x 1-3/4 GR8          |
| 33  | 0400491   | 4   | LOCK WASHER, 1/2                       |
| 34  | 0400407   | 4   | HEX NUT 1/2-13 UNC                     |
| 35  | 0403092   | 2   | BOLT, HHCS 3/4-10 UNC x 7 GR8          |
| 36  | 0403082   | 2   | LOCK WASHER 3/4                        |
| 37  | 08011929  | 1   | AUTOGRIP TOWBALL ADAPTOR (OPTIONAL)    |
| 38  | 03004649  | 1   | TOWBALL                                |
| 39  | 83711     | 1   | NUT 1.000" RAMCO LOCK                  |

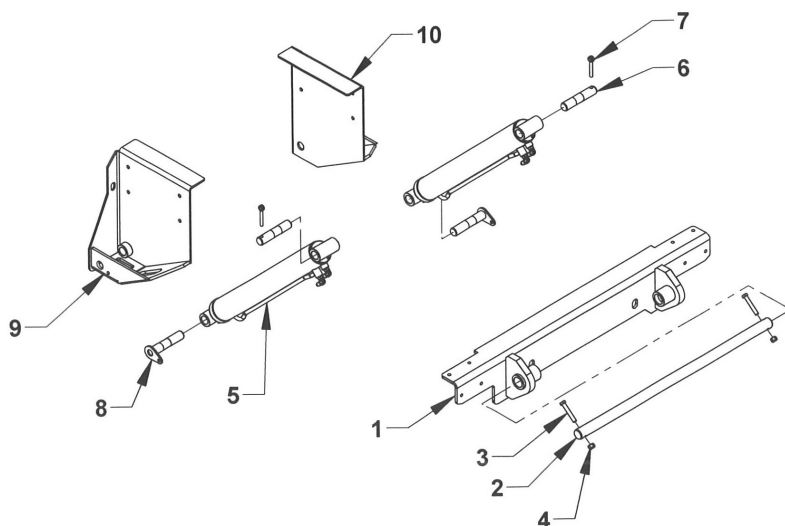
# **Section V - PARTS** **INBOARD TILT CYLINDERS-INBOARD SADDLE**



| REF | PART #  | QTY | DESCRIPTION                          |
|-----|---------|-----|--------------------------------------|
| 1   | 0809927 | 1   | HINGE ANGLE SERIES 10 G2             |
| 2   | 0752164 | 1   | SUBFRAME HINGE PIN SERIES 10 G2      |
| 3   | 0403149 | 2   | BOLT, HHCS 1/2-13 UNC x 3            |
| 4   | 0403100 | 2   | NYLON LOCK NUT 1/2-13 UNC            |
| 5   | 721092  | 2   | TILT CYLINDER 3 x 23                 |
| 6   | 13068   | 2   | TILT CYLINDER BASE KEEPER PIN        |
| 7   | 84680   | 2   | KEEPER PIN 3/8 ROD END               |
| 8   | 1A828A  | 2   | INBOARD SADDLE TILT PIN              |
| 9   | 1A8002  | 1   | SERIES 10 INBOARD SADDLES            |
| 10  | 1A821S  | 2   | SADDLE SHIM                          |
| 11  | 1A925   | 2   | INBOARD SADDLE UNDER-FRAME Z-BRACKET |

## Section V - PARTS

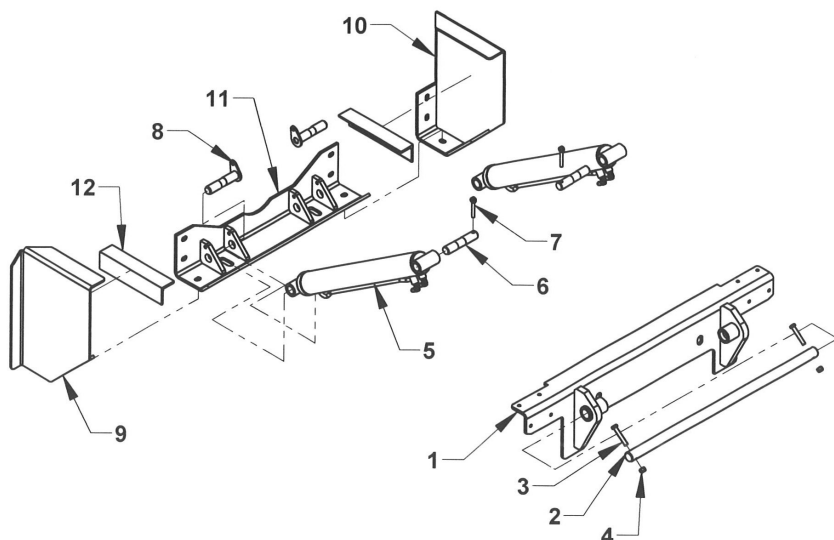
### OUTBOARD TILT CYLINDERS-OUTBOARD SADDLE



| REF | PART #     | QTY | DESCRIPTION                         |
|-----|------------|-----|-------------------------------------|
| 1   | 0809927-FD | 1   | SERIES 10 G2 HINGE ANGLE-FORD/DODGE |
| 2   | 0752164    | 1   | SERIES 10 G2 SUBFRAME HINGE PIN     |
| 3   | 0403149    | 2   | BOLT, HHCS 1/2-13 UNC x 3           |
| 4   | 0403100    | 2   | NYLON LOCK NUT 1/2-13 UNC           |
| 5   | 721092     | 2   | TILT CYLINDER 3 x 23                |
| 6   | 13068      | 2   | TILT CYLINDER BASE KEEPER PIN       |
| 7   | 84680      | 2   | KEEPER PIN 3/8 ROD END              |
| 8   | 1A735      | 2   | OUTBOARD TILT CYLINDER KEEPER PIN   |
| 9   | 1A730L     | 1   | 18 IN. OUTBOARD TILT SADDLE - LH    |
| 10  | 1A730R     | 1   | 18 IN. OUTBOARD TILT SADDLE - RH    |

## Section V - PARTS

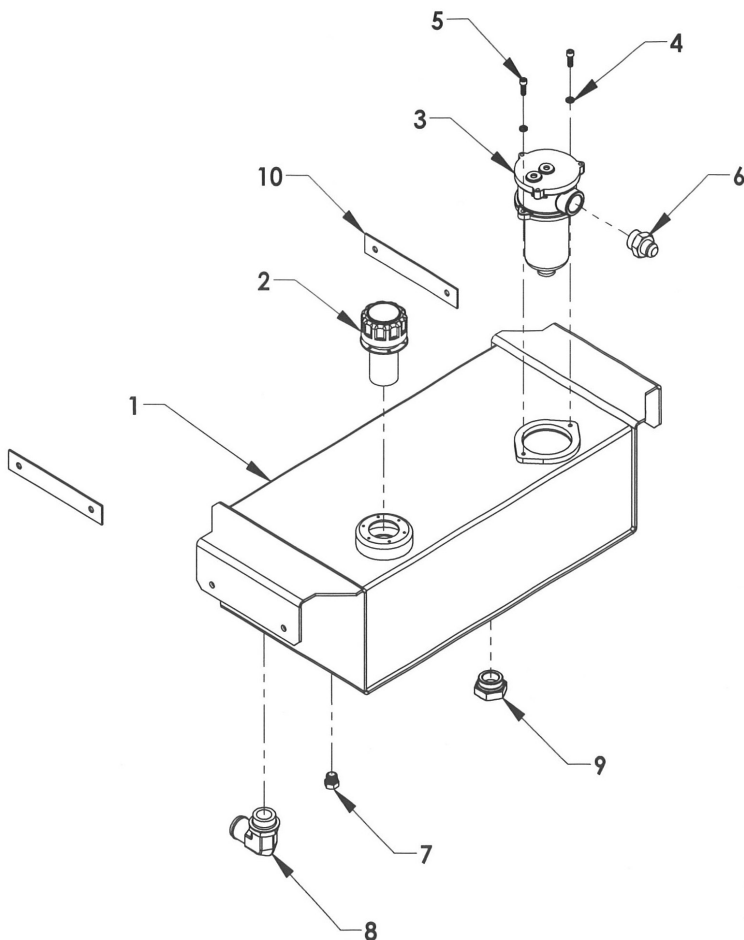
### INBOARD TILT CYLINDERS-OUTBOARD SADDLE



| REF | PART #    | QTY | DESCRIPTION                             |
|-----|-----------|-----|-----------------------------------------|
| 1   | 0809927   | 1   | SERIES 10 G2 HINGE ANGLE                |
| 2   | 0752164   | 1   | SERIES 10 G2 SUBFRAME HINGE PIN         |
| 3   | 0403149   | 2   | BOLT, HHCS 1/2-13 UNC x 3               |
| 4   | 0403100   | 2   | NYLON LOCK NUT 1/2-13 UNC               |
| 5   | 721092    | 2   | TILT CYLINDER 3 x 23                    |
| 6   | 13068     | 2   | TILT CYLINDER BASE KEEPER PIN           |
| 7   | 84680     | 2   | KEEPER PIN 3/8 ROD END                  |
| 8   | 1A525     | 2   | INBOARD TILT CYLINDER KEEPER PIN        |
| 9   | 1A740L    | 1   | 20 IN. OUTBOARD TILT SADDLE - LEFT      |
|     | 1A540L    | 1   | 22 IN. OUTBOARD TILT SADDLE - LEFT      |
| 10  | 1A740R    | 1   | 20 IN. OUTBOARD TILT SADDLE - RIGHT     |
|     | 1A540R    | 1   | 22 IN. OUTBOARD TILT SADDLE - RIGHT     |
| 11  | 1A590-296 | 1   | SADDLE CONNECTING ANGLE - 29.6"         |
|     | 1A560-310 | 1   | SADDLE CONNECTING ANGLE - 31.0"         |
|     | 1A560-315 | 1   | SADDLE CONNECTING ANGLE - 31.5"         |
|     | 1A560-323 | 1   | SADDLE CONNECTING ANGLE - 32.3"         |
|     | 1A560-33  | 1   | SADDLE CONNECTING ANGLE - 33.0"         |
|     | 1A560-335 | 1   | SADDLE CONNECTING ANGLE - 33.5"         |
|     | 1A560     | 1   | SADDLE CONNECTING ANGLE - 34.0"         |
| 12  | 1A743     | 2   | SADDLE MOUNTING ANGLE - 3 x 2.5 x 12.75 |

## Section V - PARTS

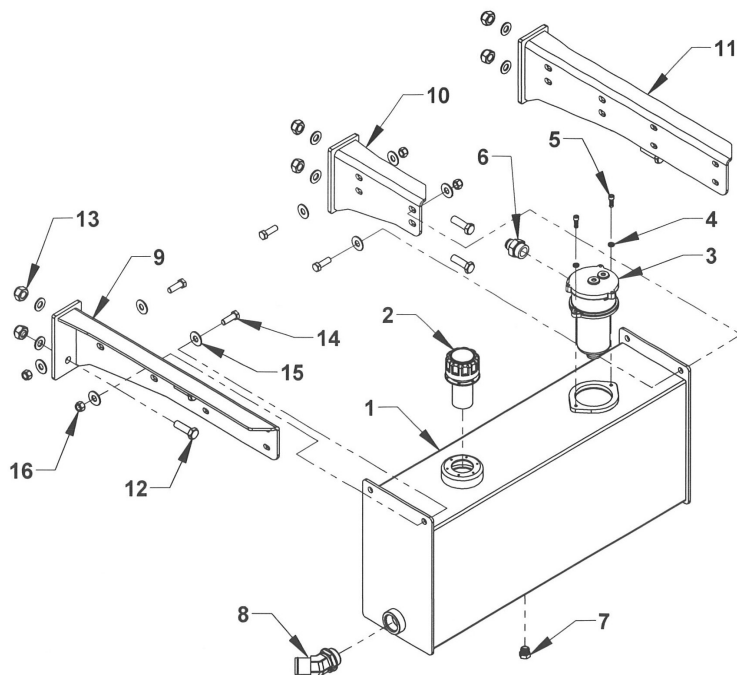
### 12 GAL. INBOARD OIL RESERVOIR GROUP-763100G



| REF | PART #   | QTY | DESCRIPTION                       |
|-----|----------|-----|-----------------------------------|
| 1   | 763100   | 1   | INBOARD OIL RESERVOIR WELDMENT    |
| 2   | 76213    | 1   | FILLER BREATHER CAP               |
| 3   | 76270    | 1   | FILTER ASSEMBLY                   |
|     | 76271    | 1   | REPLACEMENT FILTER ELEMENT        |
| 4   | 0402118  | 2   | LOCK WASHER 5/16 SS               |
| 5   | 04001427 | 2   | BH CAP SCREW 5/16-18 UNC x 7/8 SS |
| 6   | 0301368  | 1   | ADAPTOR 202702-16 x 12            |
| 7   | 03006085 | 1   | ADAPTOR 900598-8 (DRAIN PLUG)     |
| 8   | 77C92    | 1   | 20 x 24 SUCTION HOSE FITTING 90 ° |
| 9   | 77620    | 1   | ADAPTOR 900598-20 (DRAIN PLUG)    |
| 10  | 763106   | 2   | FRAME WIDTH SHIM                  |

## Section V - PARTS

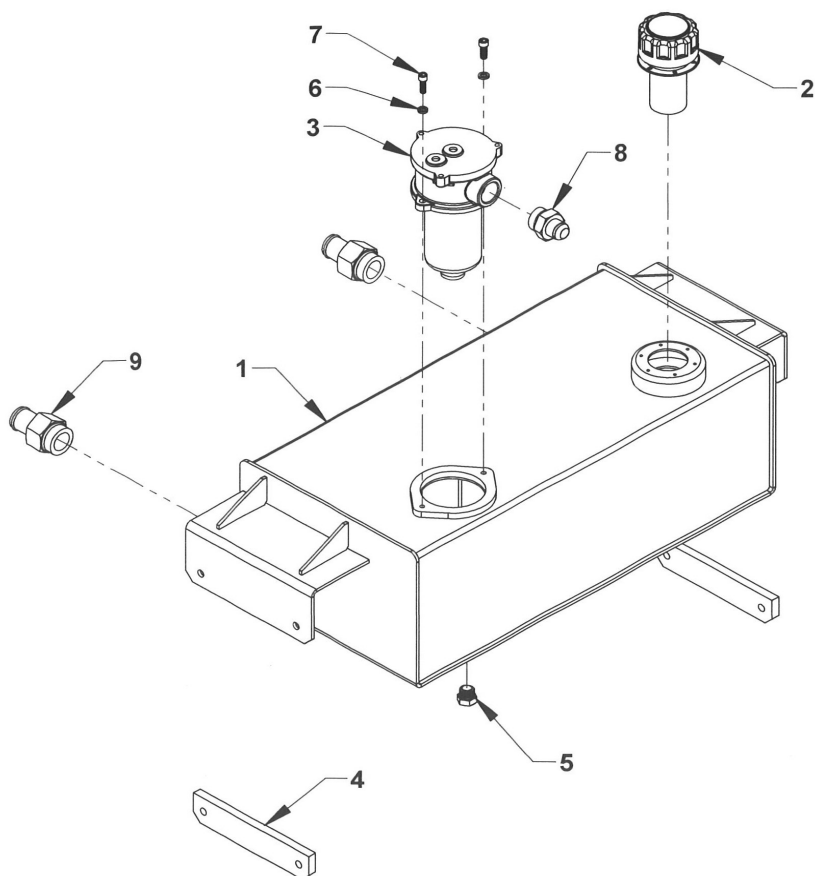
### 14 GAL. OUTBOARD OIL TANK GROUP-762110G (CONVENTIONAL CARRIER)



| REF | PART #   | QTY | DESCRIPTION                            |
|-----|----------|-----|----------------------------------------|
| 1   | 762110   | 1   | 14 GAL. OUTBOARD OIL TANK WELDMENT     |
| 2   | 76213G   | 1   | FILLER BREATHER CAP ASSEMBLY           |
| 3   | 76270    | 1   | FILTER ASSEMBLY                        |
|     | 76271    | 1   | REPLACEMENT FILTER ELEMENT             |
| 4   | 0402118  | 2   | LOCK WASHER 5/16 SS                    |
| 5   | 04001427 | 2   | BHCS SCHS 5/16-18 UNC x 7/8 SS         |
| 6   | 0301368  | 1   | ADAPTOR 202702 16 x 12                 |
| 7   | 03006085 | 1   | ADAPTOR 900598-8 (MAGNETIC DRAIN PLUG) |
| 8   | 03006341 | 1   | 20 x 24 SUCTION HOSE FITTING 45°       |
| 9   | 37855L   | 1   | TANK MTG. BRACKET - LH                 |
|     | 37858L   | 1   | TANK MTG. BRACKET (SHORT) - LH         |
| 10  | 37858R   | 1   | TANK MTG. BRACKET (SHORT) - RH         |
| 11  | 37855R   | 1   | TANK MTG. BRACKET - RH                 |
| 12  | 0400274  | 6   | BOLT 5/8-11 x 2 UNC GR8                |
| 13  | 0400426  | 6   | NYLON LOCK NUT 5/8-11 UNC ZINC PLATED  |
| 14  | 0400181  | 6   | BOLT 1/2-13 UNC x 1-1/2 GR5            |
| 15  | 0400492  | 8   | FLAT WASHER 1/2 ZINC PLATED            |
| 16  | 0403100  | 4   | NYLON LOCK NUT 1/2-13 UNC ZINC PLATED  |

## Section V - PARTS

### 12 GAL. INBOARD OIL RESERVOIR GROUP-0940440 TRANSFER FLOW FUEL TANK

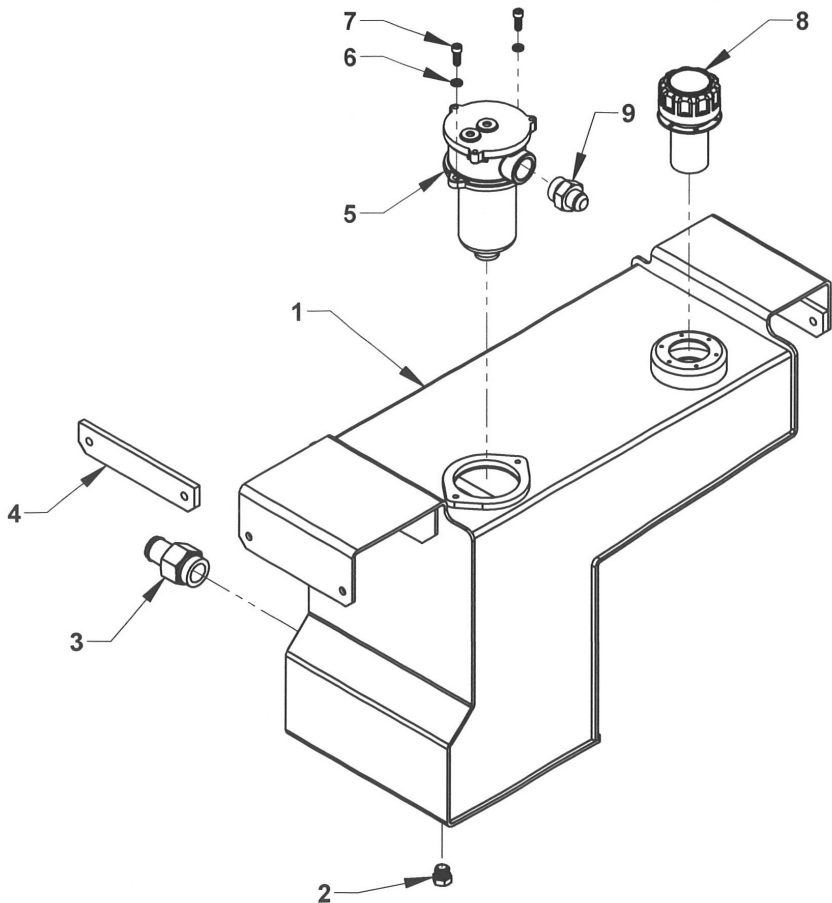


| REF | PART #      | QTY | DESCRIPTION                              |
|-----|-------------|-----|------------------------------------------|
| 1   | 0811131     | 1   | INBOARD OIL TANK - TRANSFER FLOW         |
| 2   | 76213       | 1   | FILLER BREATHER CAP                      |
| 3   | 76270       | 1   | IN-TANK FILTER ASSEMBLY #16 SAE PORT     |
|     | 76271       | 1   | REPLACEMENT FILTER ELEMENT               |
| 4   | 0752557-500 | 2   | INBOARD OIL TANK SHIM - 1/2 (DODGE ONLY) |
| 5   | 03006085    | 1   | #8 O-RING PLUG                           |
| 6   | 0402118     | 2   | LOCK WASHER 5/16 SS                      |
| 7   | 04001427    | 2   | CAP SCREW 5/16-18 UNC x 7/8 SS           |
| 8   | 0301368     | 1   | ADAPTOR 202702 - 16 x 12                 |
| 9   | 77C00       | 2   | STRAIGHT SUCTION HOSE FITTING 20 x 20    |



Section V - PARTS

2017 FORD F550/DODGE 5500  
12 GAL. OIL RESERVOIR GROUP - 09003530

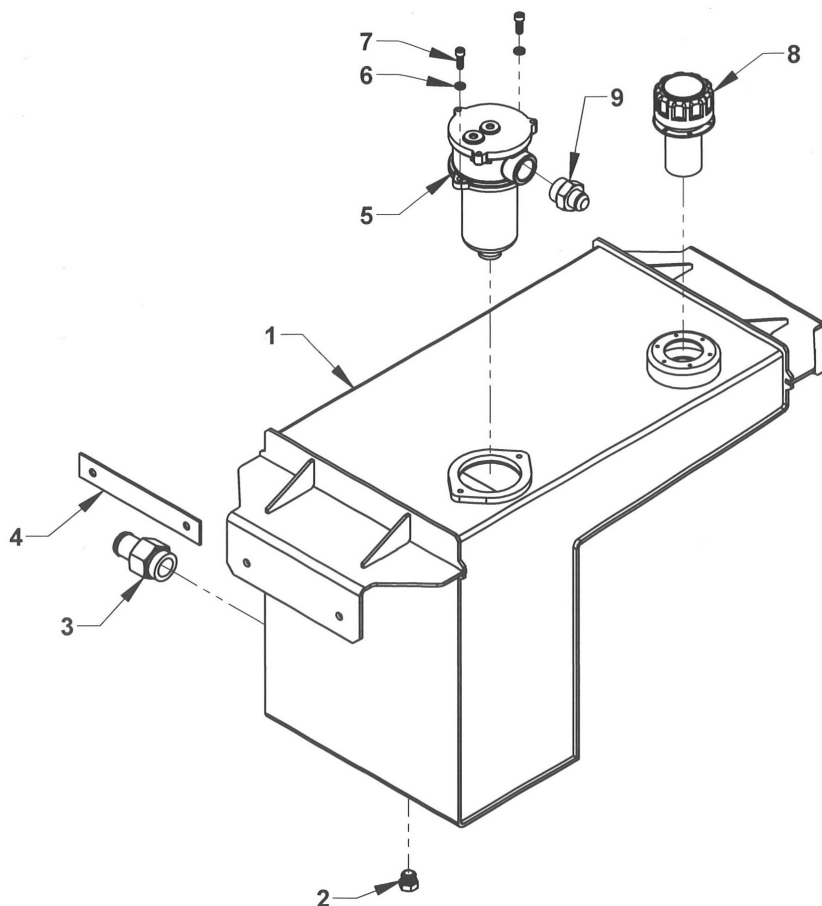


| REF | PART #      | QTY | DESCRIPTION                               |
|-----|-------------|-----|-------------------------------------------|
| 1   | 08003114    | 1   | SERIES 10 G2 IBT OFFSET OIL TANK - 12 GAL |
| 2   | 03006085    | 1   | #8 O-RING PLUG                            |
| 3   | 77C00       | 1   | STRAIGHT SUCTION HOSE FITTING 20 x 20     |
| 4   | 0752557-375 | 2   | IB OIL TANK SHIM - 3/8 (DODGE ONLY)       |
| 5   | 76270       | 1   | IN-TANK FILTER ASSEMBLY #16 SAE PORT      |
|     | 76271       | 1   | REPLACEMENT FILTER ELEMENT                |
| 6   | 0402118     | 2   | LOCK WASHER 5/16 SS                       |
| 7   | 04001427    | 2   | BOLT SHCS 5/16-18 UNC x 7/8 SS            |
| 8   | 76213       | 1   | FILLER BREATHER CAP                       |
| 9   | 0301368     | 1   | ADAPTOR 202702 - 16 x 12                  |

## Section V - PARTS

### 13 GAL. OIL RESERVOIR GROUP - 09012752

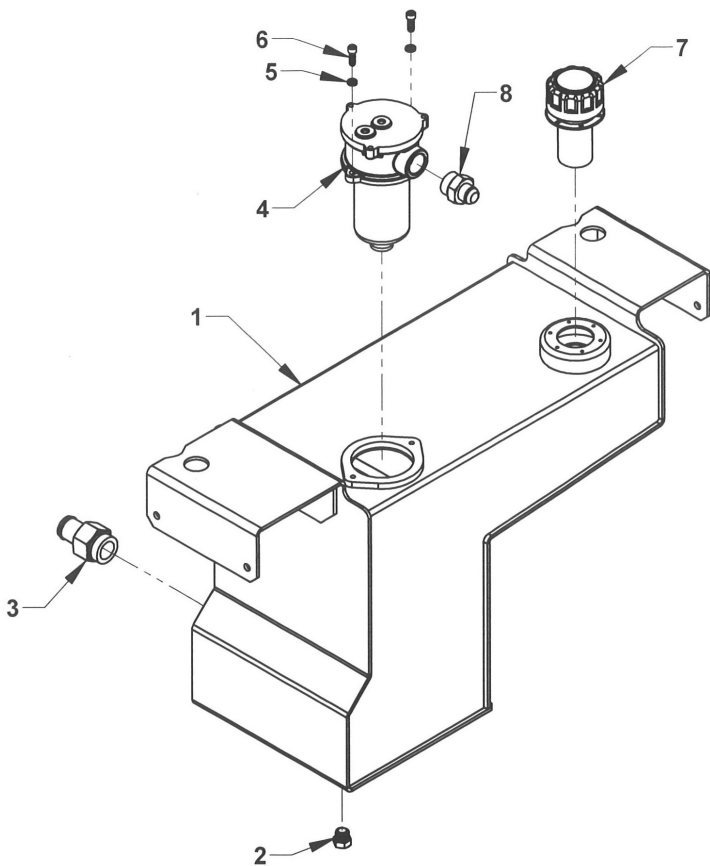
2019 GM / INTERNATIONAL CV



| REF | PART #     | QTY | DESCRIPTION                               |
|-----|------------|-----|-------------------------------------------|
| 1   | 08011068   | 1   | SERIES 10 G2 IBT OFFSET OIL TANK - 13 GAL |
| 2   | 03006085   | 1   | #8 O-RING PLUG                            |
| 3   | 77C00      | 1   | STRAIGHT SUCTION HOSE FITTING 20 x 20     |
| 4   | 763106-125 | 2   | IB OIL TANK SHIM - 3/8 (DODGE ONLY)       |
| 5   | 76270      | 1   | IN-TANK FILTER ASSEMBLY #16 SAE PORT      |
|     | 76271      | 1   | REPLACEMENT FILTER ELEMENT                |
| 6   | 04002118   | 2   | LOCK WASHER 5/16 SS                       |
| 7   | 04001427   | 2   | BOLT SHCS 5/16-18 UNC x 7/8 SS            |
| 8   | 76213      | 1   | FILLER BREATHER CAP                       |
| 9   | 0301368    | 1   | ADAPTOR 202702 - 16 x 12                  |

Section V - PARTS

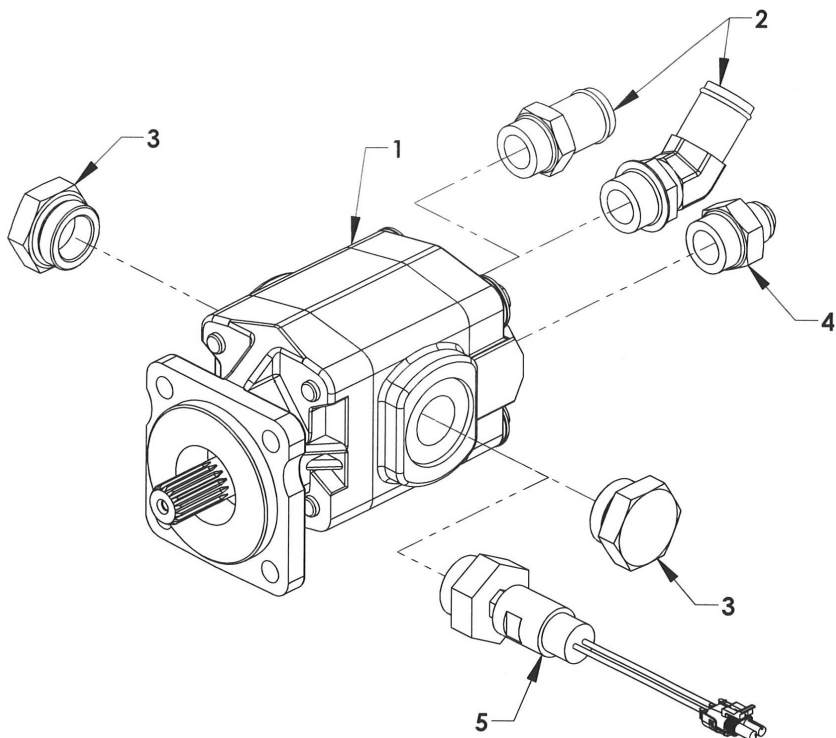
12 GAL. OIL RESERVOIR GROUP - 09018450  
2021 FORD F600



| REF | PART #   | QTY | DESCRIPTION                               |
|-----|----------|-----|-------------------------------------------|
| 1   | 08015991 | 1   | SERIES 10 G2 IBT OFFSET OIL TANK - 12 GAL |
| 2   | 03006085 | 1   | #8 O-RING PLUG                            |
| 3   | 77C00    | 1   | STRAIGHT SUCTION HOSE FITTING 20 x 20     |
| 4   | 76270    | 1   | IN-TANK FILTER ASSEMBLY #16 SAE PORT      |
|     | 76271    | 1   | REPLACEMENT FILTER ELEMENT                |
| 5   | 0402118  | 2   | LOCK WASHER 5/16 SS                       |
| 6   | 04001427 | 2   | BOLT SHCS 5/16-18 UNC x 7/8 SS            |
| 7   | 76213    | 1   | FILLER BREATHER CAP                       |
| 8   | 0301368  | 1   | ADAPTOR 202702 - 16 x 12                  |

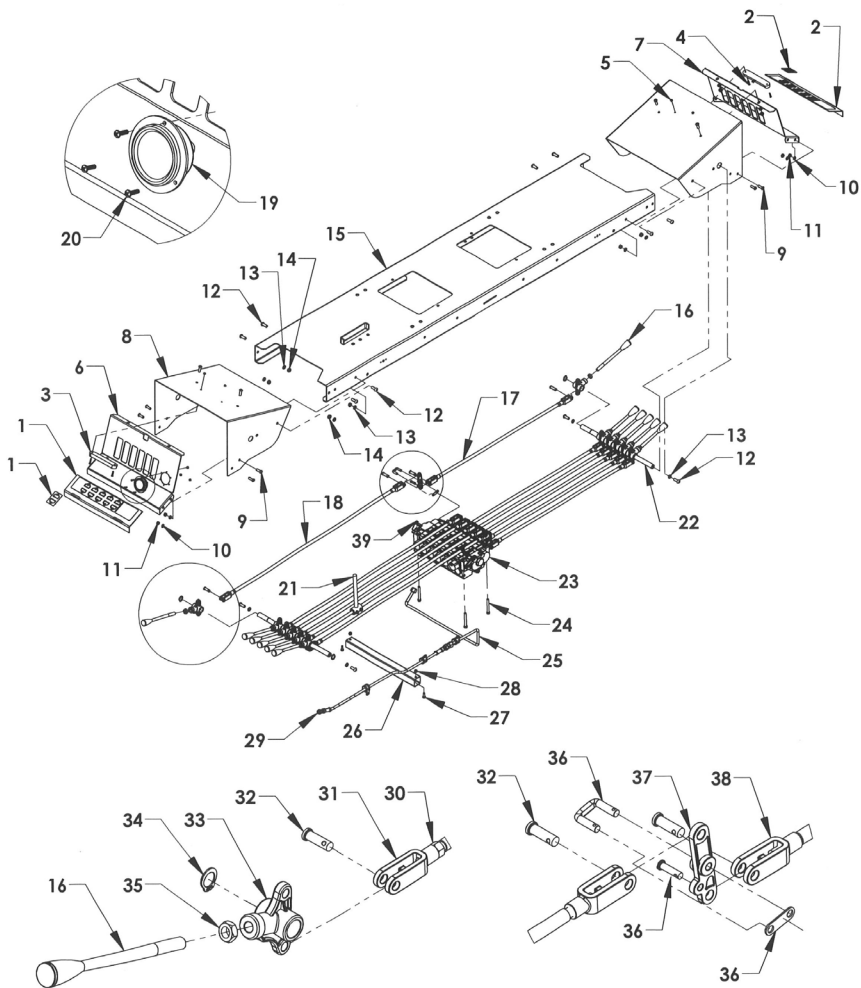
## Section V - PARTS

### DIRECT MOUNT PUMP - 18 GPM



| REF | PART #   | QTY | DESCRIPTION                                      |
|-----|----------|-----|--------------------------------------------------|
| 1   | 0320144  | 1   | 18 GPM , 1 IN.15 SPLINE SHAFT, SAE 4-BOLT FLANGE |
| 2   | 03006339 | 1   | #16-45 M O-RING x 1-1/4 M NIPPLE                 |
|     | 77C82    | 1   | #16 M O-RING x 1-1/4 M NIPPLE                    |
| 3   | 77620    | 2   | 1-1/4 O-RING PLUG 900598-20                      |
| 4   | 0301368  | 1   | #16 M O-RING x 3/4 MJIC                          |
| 5   | 0909434  | 1   | PRESSURE TRANSDUCER (OPTIONAL)                   |

Section V - PARTS  
6-SPOOL CONTROL STATION

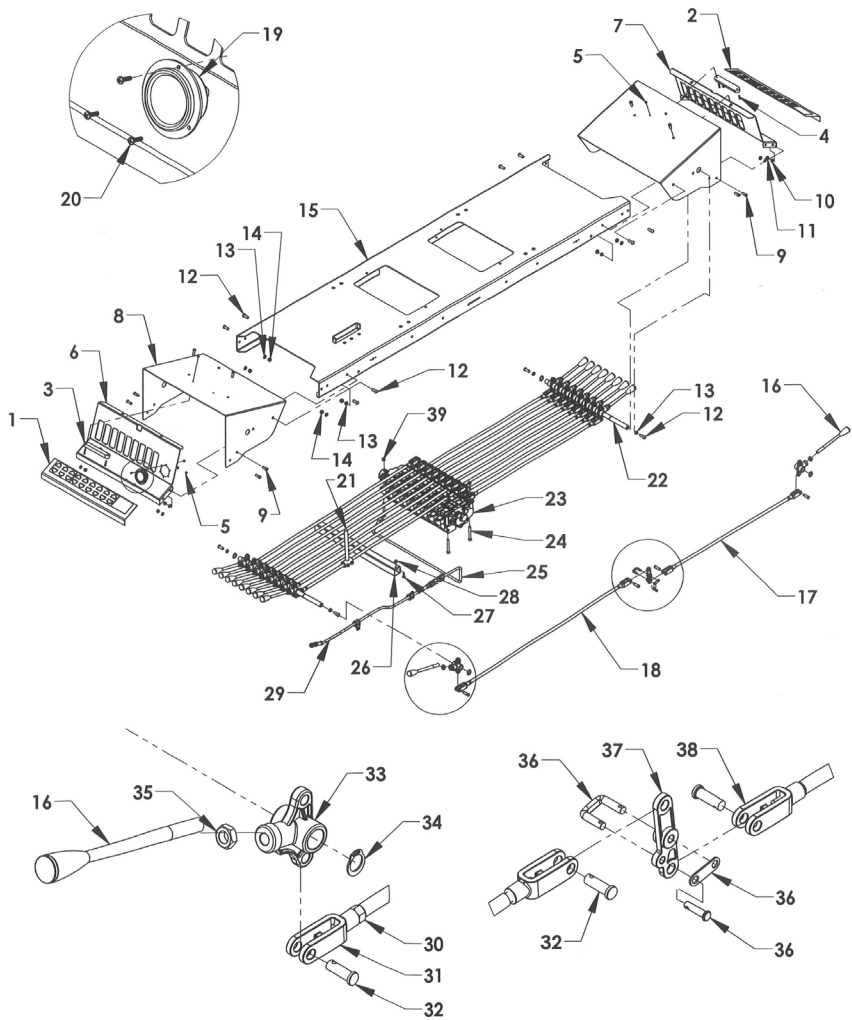


## Section V - PARTS

### 6-SPOOL CONTROL STATION

| REF | PART #     | QTY | DESCRIPTION                             |
|-----|------------|-----|-----------------------------------------|
| 1   | 18212L     | 1   | 5 SPOOL/6 SPOOL CONTROL PLACARD-LEFT    |
|     | 18237      | 1   | CONTROL PLACARD AUTOGRIP OVERLAY        |
| 2   | 18212R     | 1   | 5 SPOOL/6 SPOOL CONTROL PLACARD-RIGHT   |
|     | 18237      | 1   | CONTROL PLACARD AUTOGRIP OVERLAY        |
| 3   | 0320162    | 2   | LED CONTROL STATION LIGHT - 6 IN.       |
| 4   | 04000281   | 4   | SCREW, PHILLIPS #6-32 UNC x 7/8         |
| 5   | 04000262   | 7   | NYLON LOCK NUT #6-32 SS                 |
| 6   | 0752652L   | 1   | CONTROL PANEL - LEFT                    |
| 7   | 0752652R   | 1   | CONTROL PANEL - RIGHT                   |
| 8   | 0752651    | 2   | CONTROL HOOD                            |
| 9   | 0403079    | 12  | BHCS 5/16-18 UNC x 5/8                  |
| 10  | 0402118    | 12  | LOCK WASHER 5/16 SS                     |
| 11  | 0403074    | 12  | HEX NUT 5/16-18 UNC                     |
| 12  | 04001085   | 12  | BHCS 3/8-16 UNC x1 SS                   |
| 13  | 0402121    | 12  | LOCK WASHER 3/8 SS                      |
| 14  | 0402122    | 8   | NYLON LOCK NUT 3/8-16 UNC               |
| 15  | 181286W    | 1   | CONTROL BOX ARM WELDMENT - 79.5 IN      |
| 16  | 0320048-GY | 6   | CONTROL HANDLE 8" - GRAY                |
|     | 0320048-RD | 2   | CONTROL HANDLE 8" - RED                 |
|     | 0320048-BL | 4   | CONTROL HANDLE 8" - BLUE                |
| 17  | 7A528W     | 6   | CONTROL ROD 28-1/2                      |
| 18  | 7A538W     | 6   | CONTROL ROD 37-3/4                      |
| 19  | 0320157    | 1   | PRESSURE GAUGE HYDRAULIC - 2 IN.        |
| 20  | 04000282   | 6   | SCREW PHILLIPS #6-32 x 1/2              |
| 21  | 0809904    | 1   | ANTI-TILT CONTROL ROD WELDMENT          |
| 22  | 7A5753-17  | 2   | CONTROL HANDLE CROSS ROD 3/4 x 17       |
| 23  | 74116      | 1   | VALVE BODY GRESEN 6 SPOOL               |
|     | 74115      | 1   | VALVE BODY GRESEN 5 SPOOL (COMMON)      |
| 24  | 0403169    | 3   | HHCS 5/16-18 UNC x 2-3/4                |
| 25  | 0752718-5  | 1   | CONTROL STATION GAUGE FLUID TUBE - 5 SP |
|     | 0752718-6  | 1   | CONTROL STATION GAUGE FLUID TUBE - 6 SP |
| 26  | 18335      | 1   | CONTROL STATION WIRE TUBE - 6 SP        |
| 27  | 0400066    | 2   | HHCS 1/4-20 UNC x 3/4                   |
| 28  | 0400367    | 2   | NYLON LOCK NUT 1/4-40 UNC               |
| 29  | 0320169    | 1   | PRESSURE GAUGE HOSE                     |
| 30  | 0403115    | 12  | NUT 3/8-24 UNF RH                       |
| 31  | 84530      | 12  | CLEVIS -RH THREAD 3/8-24                |
| 32  | 84620      | 24  | CLEVIS PIN 3/8 x 1-1/8                  |
| 33  | 7A1155     | 12  | CONTROL HANDLE PIVOT BASE               |
| 34  | 86075E     | 4   | SNAP RING 3/4 EXTERNAL                  |
| 35  | 0400410    | 12  | 1/2-13 UNC JAM NUT ZP                   |
| 36  | 7A010      | 6   | CLEVIS PIN AND LINK ASSEMBLY            |
| 37  | 7A121      | 6   | BELL CRANK                              |
| 38  | 84540      | 12  | CLEVIS - LH THREAD 3/8-24               |
| 39  | 0400382    | 3   | NYLON LOCK NUT 5/16-18 UNC              |

Section V - PARTS  
9-SPOOL CONTROL STATION



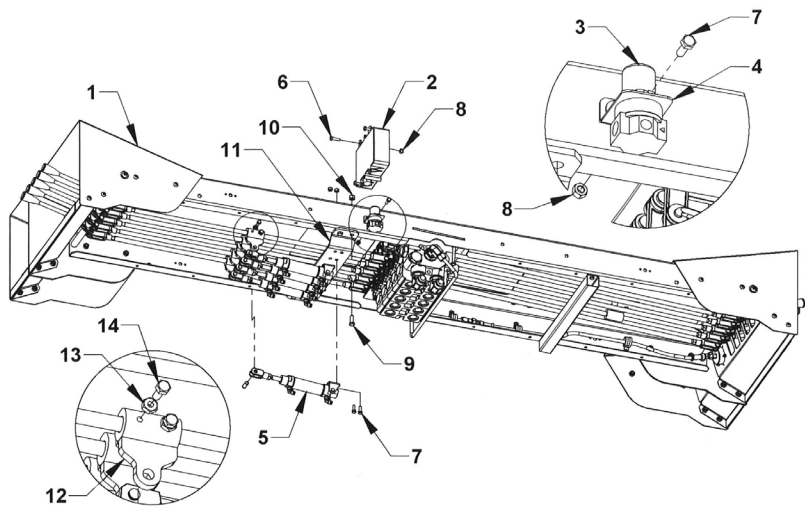
## Section V - PARTS

### 9-SPOOL CONTROL STATION

| REF | PART #     | QTY | DESCRIPTION                             |
|-----|------------|-----|-----------------------------------------|
| 1   | 18219L     | 1   | CONTROL PLACARD 4-CAR AUTOGRIP - LH     |
|     | 18218L     | 1   | CONTROL PLACARD 4-CAR CARRIER - LH      |
|     | 18224L     | 1   | CONTROL PLACARD SIDEPULLER OVERLAY - LH |
|     | 18235L     | 1   | CONTROL PLACARD DUAL DECK - LH          |
|     | 18236L     | 1   | CONTROL PLACARD DUAL DECK AG OVERLAY-LH |
| 2   | 18219R     | 1   | CONTROL PLACARD 4-CAR AUTOGRIP - RH     |
|     | 18218R     | 1   | CONTROL PLACARD 4-CAR CARRIER - RH      |
|     | 18224R     | 1   | CONTROL PLACARD SIDEPULLER OVERLAY-RH   |
|     | 18235R     | 1   | CONTROL PLACARD DUAL DECK - RH          |
|     | 18236R     | 1   | CONTROL PLACARD DUAL DECK AG OVERLAY-RH |
| 3   | 0320162    | 2   | LED CONTROL STATION LIGHT - 6 IN.       |
| 4   | 04000281   | 4   | SCREW, PHILLIPS #6-32 UNC x 7/8         |
| 5   | 04000262   | 7   | NYLON LOCK NUT #6-32 SS                 |
| 6   | 0752654L   | 1   | CONTROL PANEL - LH                      |
| 7   | 0752654R   | 1   | CONTROL PANEL - RH                      |
| 8   | 0752653    | 2   | CONTROL HOOD                            |
| 9   | 0403079    | 12  | BHCS 5/16-18 UNC x 5/8                  |
| 10  | 0402118    | 12  | LOCK WASHER 5/16, SS                    |
| 11  | 0403074    | 12  | HEX NUT 5/16-18 UNC                     |
| 12  | 04001085   | 12  | BHCS 3/8-16 UNC x 1, SS                 |
| 13  | 0402121    | 12  | LOCK WASHER 3/8 SS                      |
| 14  | 0402122    | 8   | NYLON LOCK NUT 3/8-16 UNC               |
| 15  | 181289W    | 1   | CONTROL BOX ARM WELDMENT - 79.5 IN      |
| 16  | 0320048-GY | 6   | CONTROL HANDLE 8" - GRAY                |
|     | 0320048-RD | 4   | CONTROL HANDLE 8" - RED                 |
|     | 0320048-BL | 6   | CONTROL HANDLE 8" - BLUE                |
|     | 0320048-GR | 2   | CONTROL HANDLE 8" - GREEN               |
| 17  | 7A528W     | 9   | CONTROL ROD 28-1/2                      |
| 18  | 7A538W     | 9   | CONTROL ROD 37-3/4                      |
| 19  | 0320157    | 1   | PRESSURE GAUGE HYDRAULIC - 2 IN.        |
| 20  | 04000282   | 3   | SCREW PHILLIPS #6-32 x 1/2              |
| 21  | 0809904    | 1   | ANTI-TILT CONTROL ROD WELDMENT          |
| 22  | 7A5753-20  | 2   | CONTROL HANDLE CROSS ROD 3/4 x 20-3/4   |
| 23  | 74118      | 1   | VALVE BODY GRESEN 8-SPOOL               |
|     | 74119      | 1   | VALVE BODY GRESEN 9 SPOOL               |
| 24  | 0403169    | 3   | HHCS 5/16-18 UNC x 2-3/4                |
| 25  | 0752718-8  | 1   | CONTROL STATION GAUGE FLUID TUBE - 8 SP |
|     | 0752718-9  | 1   | CONTROL STATION GAUGE FLUID TUBE - 9 SP |
| 26  | 18336      | 1   | CONTROL STATION WIRE TUBE - 9 SPOOL     |
| 27  | 0400366    | 2   | HHCS 1/4-20 UNC x 3/4                   |
| 28  | 0400367    | 2   | NYLON LOCK NUT 1/4-20 UNC               |
| 29  | 0320169    | 1   | PRESSURE GAUGE HOSE                     |
| 30  | 0403115    | 18  | NUT 3/8-24 HF RH                        |
| 31  | 84530      | 18  | CLEVIS -RH THREAD 3/8-24                |
| 32  | 84620      | 36  | CLEVIS PIN 3/8 x 1-1/8                  |
| 33  | 7A1155     | 18  | CONTROL HANDLE PIVOT BASE               |
| 34  | 86075E     | 4   | SNAP RING 3/4 EXTERNAL                  |
| 35  | 0400410    | 18  | 1/2-13 UNC JAM NUT ZP                   |
| 36  | 7A010      | 9   | CLEVIS PIN AND LINK ASSEMBLY            |
| 37  | 7A121      | 9   | BELL CRANK                              |
| 38  | 84540      | 18  | CLEVIS - LH THREAD 3/8-24               |
| 39  | 0400382    | 3   | NYLON LOCK NUT 5/16-18 UNC              |



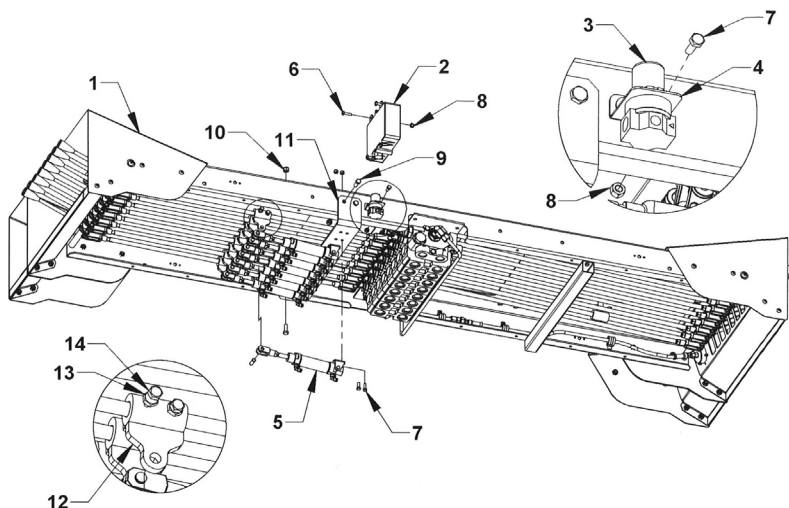
# **Section V - PARTS** **REMOTE AIR CYLINDERS 6-SPOOL**



| REF | PART #     | QTY | DESCRIPTION                            |
|-----|------------|-----|----------------------------------------|
| 1   | 183126     | 1   | 6-SPOOL CONTROL STATION                |
| 2   | 0308726-2  | 1   | RADIO CONTROL RECEIVER BOX 2-FUNCTION  |
|     | 0308726-4  |     | RADIO CONTROL RECEIVER BOX 4-FUNCTION  |
|     | 0308726-6  |     | RADIO CONTROL RECEIVER BOX 6-FUNCTION  |
|     | 03087256-8 |     | RADIO CONTROL RECEIVER BOX 8-FUNCTION  |
|     | 0308726-10 |     | RADIO CONTROL RECEIVER BOX 10-FUNCTION |
|     | 0308726-12 |     | RADIO CONTROL RECEIVER BOX 12-FUNCTION |
|     | 0308726-16 |     | RADIO CONTROL RECEIVER BOX 16-FUNCTION |
| 3   | 71713      | 1   | AIR PRESSURE REGULATOR                 |
| 4   | 0752351    | 1   | AIR PRESSURE REGULATOR MTG BRACKET     |
| 5   | 0308711    | X   | AIR CYLINDER 2 INCH STROKE             |
| 6   | 0403043    | 3   | BOLT HHCS 1/4-20 UNC x 1 GR5           |
| 7   | 0400066    | X   | BOLT HHCS 1/4-20 UNC x 3/4 GR5         |
| 8   | 0400367    | X   | NUT NYLOK 1/4-20 UNC                   |
| 9   | 0400126    | 4   | BOLT HHCS 3/8-18 UNC x 1 GR5           |
| 10  | 0400392    | 4   | NUT NYLOC 3/8-16 UNC                   |
| 11  | 181381     | 1   | AIR CYLINDER MTG BRACKET 6-SPOOL GEN2  |
| 12  | 0809905    | X   | BOLT-ON AIR CYLINDER PLATE WELDMENT    |
| 13  | 0400366    | X   | NUT HEX 1/4-20 UNC                     |
| 14  | 0400059    | X   | BOLT HHCS 1/4-20 UNC x 5/8 GR5         |

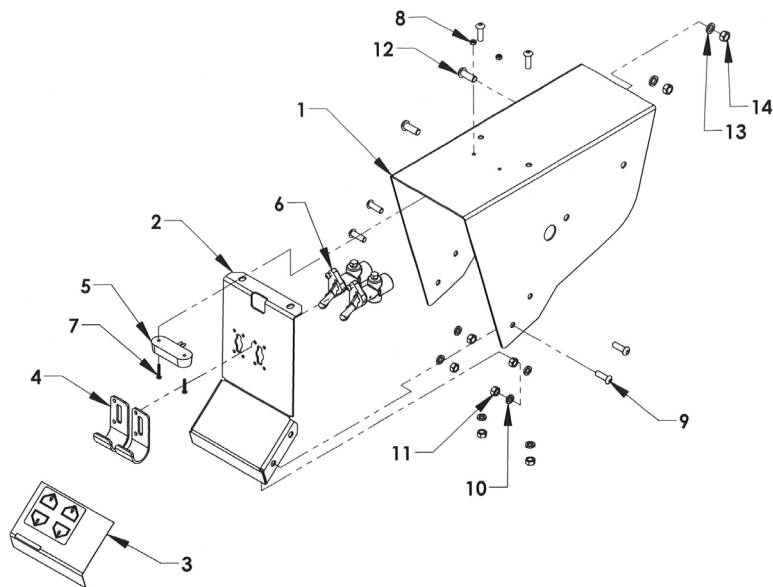
## Section V - PARTS

### REMOTE AIR CYLINDERS 9-SPOOL



| REF | PART #     | QTY | DESCRIPTION                            |
|-----|------------|-----|----------------------------------------|
| 1   | 183129     | 1   | 9-SPOOL CONTROL STATION                |
| 2   | 0308726-2  | 1   | RADIO CONTROL RECEIVER BOX 2-FUNCTION  |
|     | 0308726-4  |     | RADIO CONTROL RECEIVER BOX 4-FUNCTION  |
|     | 0308726-6  |     | RADIO CONTROL RECEIVER BOX 6-FUNCTION  |
|     | 03087256-8 |     | RADIO CONTROL RECEIVER BOX 8-FUNCTION  |
|     | 0308726-10 |     | RADIO CONTROL RECEIVER BOX 10-FUNCTION |
|     | 0308726-12 |     | RADIO CONTROL RECEIVER BOX 12-FUNCTION |
|     | 0308726-16 |     | RADIO CONTROL RECEIVER BOX 16-FUNCTION |
| 3   | 71713      | 1   | AIR PRESSURE REGULATOR                 |
| 4   | 0752351    | 1   | AIR PRESSURE REGULATOR MTG BRACKET     |
| 5   | 0308711    | X   | AIR CYLINDER 2 INCH STROKE             |
| 6   | 0403043    | 3   | BOLT HHCS 1/4-20 UNC x 1 GR5           |
| 7   | 0400066    | X   | BOLT HHCS 1/4-20 UNC x 3/4 GR5         |
| 8   | 0400367    | X   | NUT NYLOK 1/4-20 UNC                   |
| 9   | 0400126    | 4   | BOLT HHCS 3/8-18 UNC x 1 GR5           |
| 10  | 0400392    | 4   | NUT NYLOC 3/8-16 UNC                   |
| 11  | 181391     | 1   | AIR CYLINDER MTG BRACKET 9-SPOOL GEN2  |
| 12  | 0809905    | X   | BOLT-ON AIR CYLINDER PLATE WELDMENT    |
| 13  | 0400366    | X   | NUT HEX 1/4-20 UNC                     |
| 14  | 0400059    | X   | BOLT HHCS 1/4-20 UNC x 5/8 GR5         |

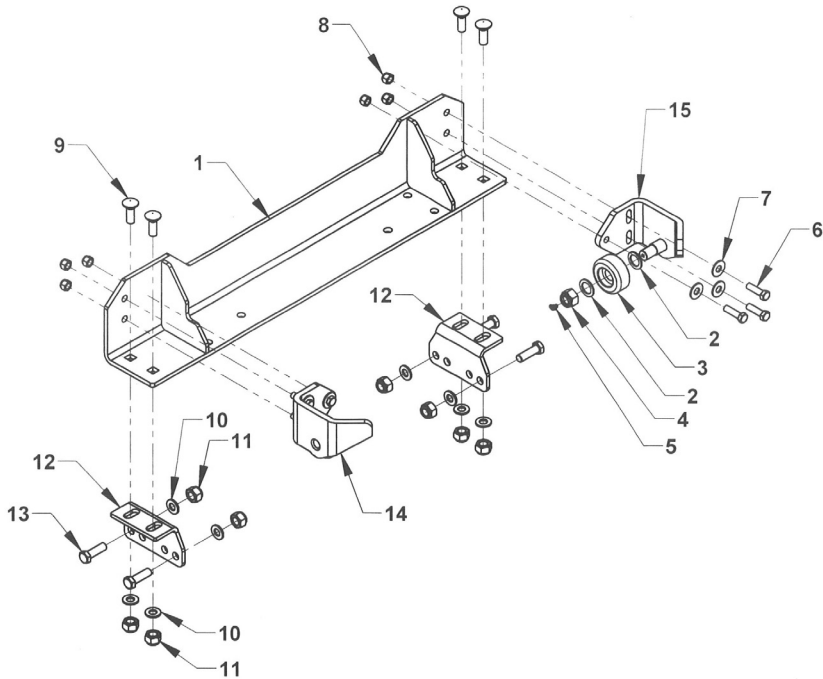
# **Section V - PARTS** **2 AIR VALVE CONTROL STATION**



| REF | PART #   | QTY | DESCRIPTION                                     |
|-----|----------|-----|-------------------------------------------------|
| 1   | 0752655  | 1   | 2-TOGGLE AIR VALVE CONTROL HOOD                 |
| 2   | 0752656L | 1   | 2-TOGGLE AIR VALVE CONTROL PANEL - LEFT         |
|     | 0752656R | 1   | 2-TOGGLE AIR VALVE CONTROL PANEL - RIGHT        |
| 3   | 18221L   | 1   | 2-TOGGLE AIR VALVE CONTROL PLACARD - LEFT       |
|     | 18221R   | 1   | 2-TOGGLE AIR VALVE CONTROL PLACARD - RIGHT      |
|     | 18238L   |     | 2-TOGGLE AIR DUAL WINCH CONTROL PLACARD - LEFT  |
|     | 18238R   |     | 2-TOGGLE AIR DUAL WINCH CONTROL PLACARD - RIGHT |
| 4   | 18145    | 2   | TOGGLE AIR GUARD                                |
| 5   | 0320161  | 1   | CONTROL LIGHT                                   |
| 6   | 71716    | 2   | TOGGLE AIR VALVE                                |
| 7   | 04000281 | 2   | SCREW PRH #6-32 UNC x 7/8 SS                    |
| 8   | 0403147  | 2   | NUT, NYLON #6-32 UNC SS                         |
| 9   | 0403079  | 6   | BOLT BHCS 5/16-18 UNC x 1 SS                    |
| 10  | 0402118  | 6   | LOCK WASHER 5/16 SS                             |
| 11  | 0403074  | 6   | NUT, NYLON 5/16-18 UNC SS                       |
| 12  | 04001085 | 2   | BOLT HHCS 3/8-16 UNC x 1 SS                     |
| 13  | 0402121  | 2   | LOCK WASHER 3/8-16 SS                           |
| 14  | 0402122  | 2   | NUT, NYLON 3/8-16 UNC                           |

## Section V - PARTS

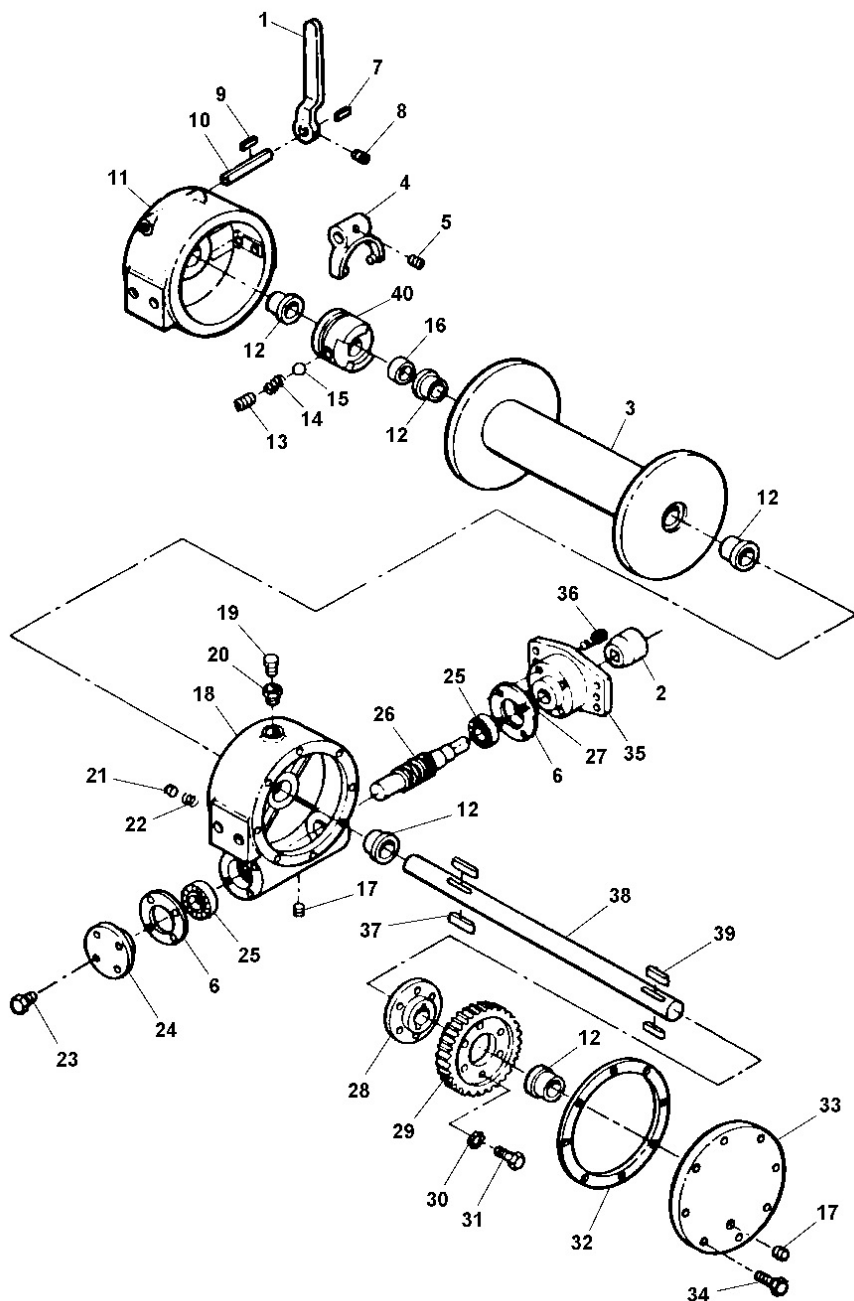
### BODY LOCK ASSEMBLY-0940348



| REF | PART #   | QTY | DESCRIPTION                        |
|-----|----------|-----|------------------------------------|
| 1   | 0809928  | 1   | SERIES 10/20/30 G2 ROLLER BED LOCK |
| 2   | 0400470  | 4   | FLAT WASHER 1                      |
| 3   | 36310    | 2   | ROLLER WHEEL                       |
| 4   | 04001225 | 2   | NYLON LOCK NUT 7/8-14 UNF          |
| 5   | 0306382  | 2   | GREASE FITTING 1/4-28              |
| 6   | 0400211  | 6   | BOLT, HHCS 1/2-13 UNC x 1-3/4      |
| 7   | 0400492  | 6   | FLAT WASHER 1/2 IN.                |
| 8   | 0400408  | 6   | NYLON LOCK NUT 1/2-13 UNC          |
| 9   | 0403068  | 4   | CARRIAGE BOLT 5/8-11 UNC x 1-3/4   |
| 10  | 0400505  | 8   | FLAT WASHER 5/8                    |
| 11  | 0400421  | 8   | NYLON LOCK NUT 5/8-11 UNC          |
| 12  | 0809183  | 2   | BODY LOCK MOUNTING BRACKET         |
| 13  | 0400260  | 4   | BOLT, HHCS 5/8-11 UNC x 2 GRADE 5  |
| 14  | 36315L   | 1   | BODY LOCK HOLD-DOWN - LH           |
| 15  | 36315R   | 1   | BODY LOCK HOLD DOWN - RH           |

## Section V - PARTS

### RAMSEY 234 HYDRAULIC WINCH



## Section V - PARTS

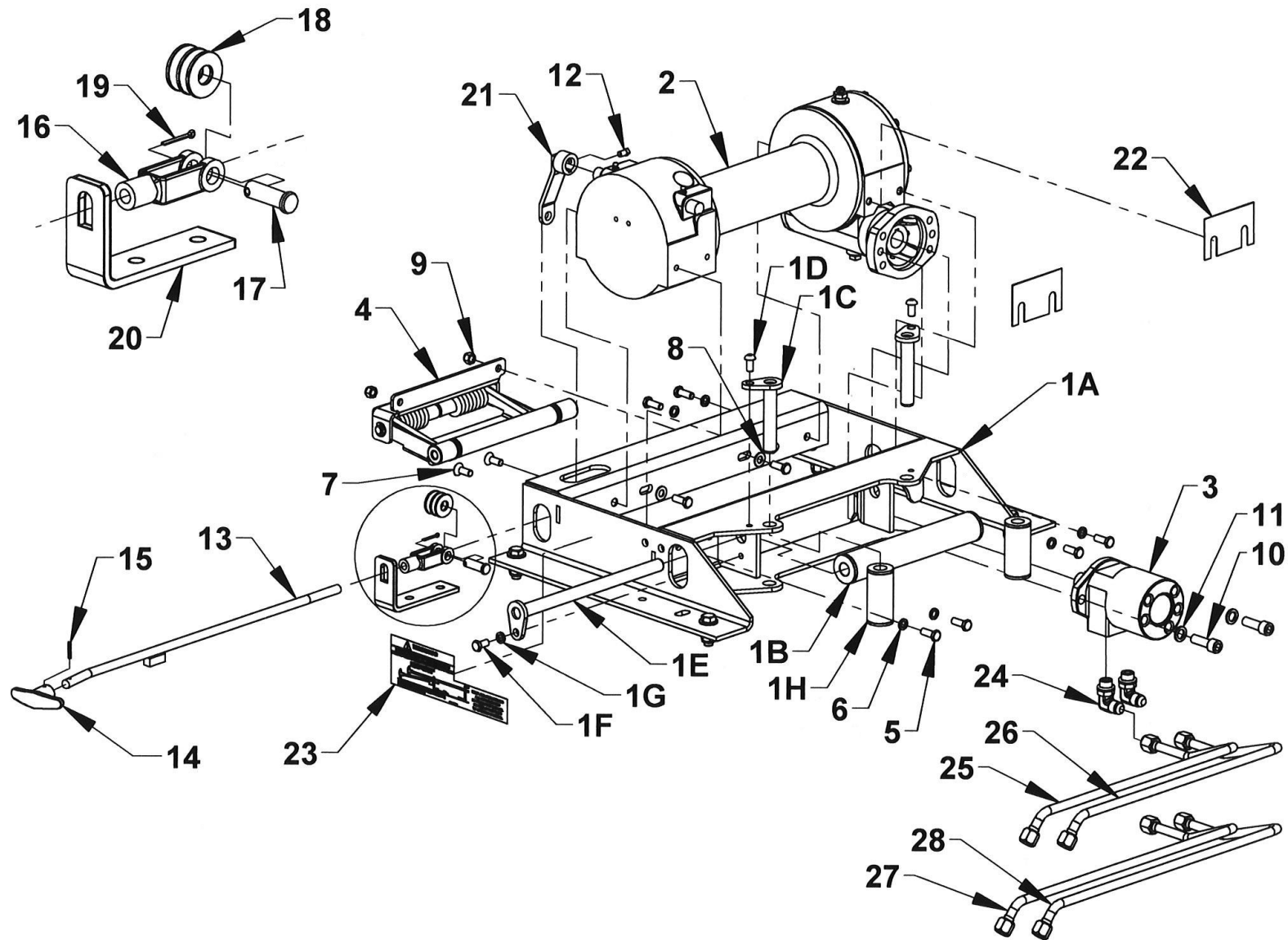
### RAMSEY 234 HYDRAULIC WINCH

| REF | PART #  | QTY | DESCRIPTION               |
|-----|---------|-----|---------------------------|
| 1   | 0300261 | 1   | LEVER                     |
| 2   | 0300290 | 1   | COUPLING                  |
| 3   | 0300381 | 1   | DRUM                      |
| 4   | 0300398 | 1   | YOKE                      |
| 5   | 0300399 | 1   | SCREW                     |
| 6   | 0300447 | 2   | GASKET                    |
| 7   | 0300448 | 1   | KEY                       |
| 8   | 0300449 | 1   | SCREW                     |
| 9   | 0300450 | 1   | KEY                       |
| 10  | 0300451 | 1   | SHAFT                     |
| 11  | 0300452 | 1   | CLUTCH HOUSING            |
| 12  | 0300453 | 5   | BUSHING                   |
| 13  | 0300454 | 1   | SCREW                     |
| 14  | 0300455 | 1   | SPRING                    |
| 15  | 0300456 | 1   | BALL                      |
| 16  | 0300458 | 1   | SPACER                    |
| 17  | 0300459 | 2   | PLUG                      |
| 18  | 0300460 | 1   | HOUSING                   |
| 19  | 0300461 | 1   | PLUG                      |
| 20  | 0300462 | 1   | REDUCER                   |
| 21  | 0300463 | 1   | DRAG BRAKE                |
| 22  | 0300464 | 1   | SPRING                    |
| 23  | 0300465 | 16  | SCREW                     |
| 24  | 0300466 | 1   | CAP                       |
| 25  | 0300467 | 2   | BEARING                   |
| 26  | 0300468 | 1   | WORM                      |
| 27  | 0300471 | 1   | SEAL                      |
| 28  | 0300472 | 1   | HUB                       |
| 29  | 0300473 | 1   | GEAR                      |
| 30  | 0300474 | 6   | WASHER                    |
| 31  | 0300475 | 6   | SCREW                     |
| 32  | 0300476 | 1   | GASKET                    |
| 33  | 0600477 | 1   | COVER                     |
| 34  | 0300569 | 4   | SCREW                     |
| 35  | 0300694 | 1   | CAP ADAPTOR               |
| 36  | 0300695 | 1   | SCREW                     |
| 37  | --      | 2   | KEY                       |
| 38  | --      | 1   | SHAFT                     |
| 39  | --      | 2   | KEY                       |
| 40  | --      | 1   | CLUTCH                    |
| 41  | 0308608 | 1   | TORSION SPRING            |
|     | 0308698 | 1   | 4 TON WORM WINCH ASSEMBLY |

\* When ordering specify winch serial number.

## Section V - PARTS

### RAMSEY HD234 MANUAL-SHIFT WINCH GROUP W/SINGLE CLUTCH CONTROL ROD ASSEMBLY (UNDERWIND)



## Section V - PARTS

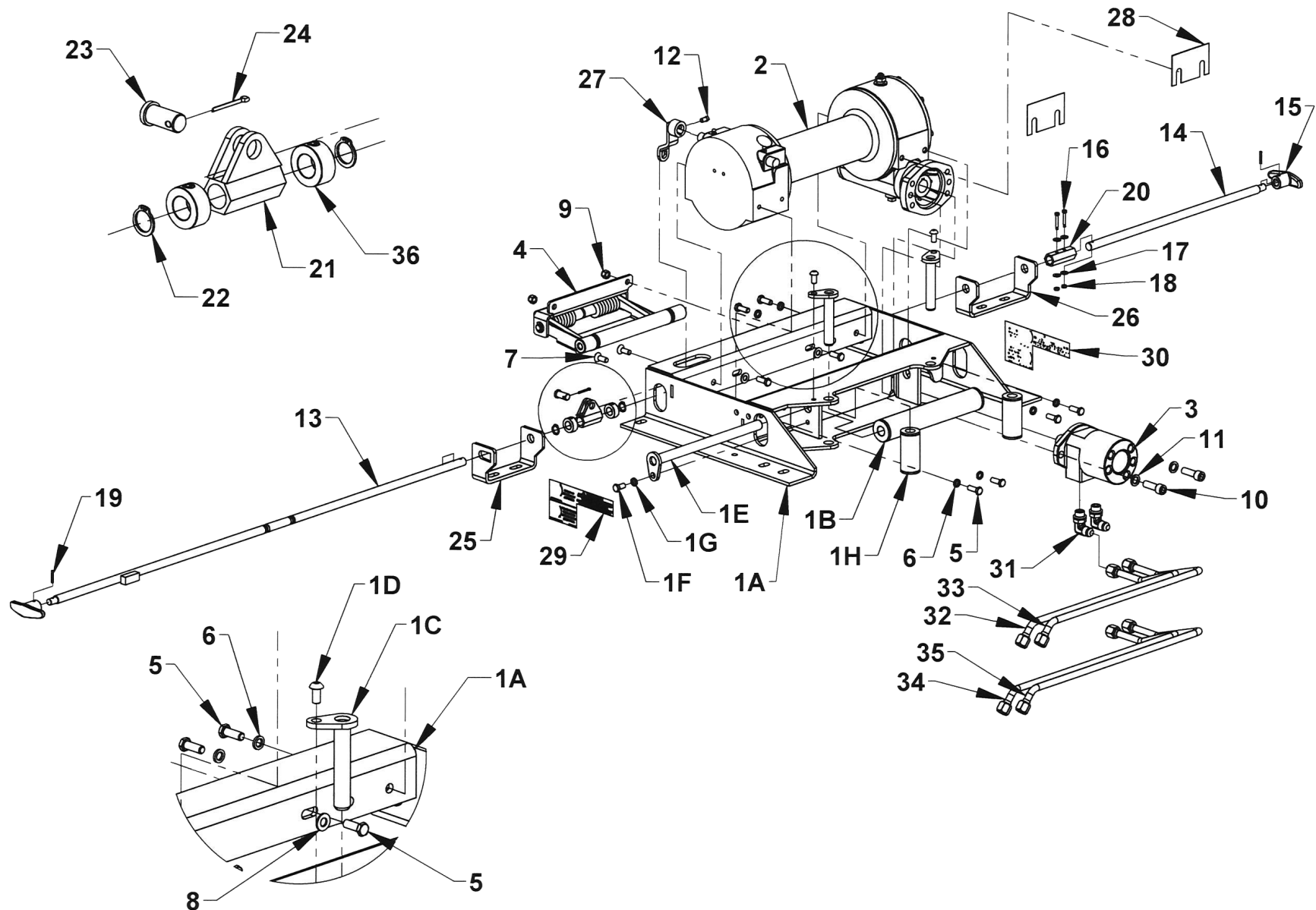
### RAMSEY HD234 MANUAL-SHIFT WINCH GROUP W/SINGLE CLUTCH CONTROL ROD ASSEMBLY (UNDERWIND)

| REF | PART #          | QTY | DESCRIPTION                                |
|-----|-----------------|-----|--------------------------------------------|
| 1   | 0940425         | 1   | RAMSEY HD234 WINCH MTG FRAME-GEN2          |
| 1A  | 0811139         | 1   | RAMSEY HD234 WINCH MOUNTING FRAME          |
| 1B  | 0940428         | 1   | ROLLER ASSEMBLY - 1-3/4 DIAMETER           |
| 1C  | 0811142         | 1   | VERTICAL ROLLER KEEPER PIN - RAMSEY 8K     |
| 1D  | 0403004         | 2   | BOLT- BHCS 3/8-16 UNC x 3/4 ZP             |
| 1E  | 0811145         | 2   | ROLLER GUIDE KEEPER PIN - RAMSEY 8K WORM   |
| 1F  | 0400121         | 1   | BOLT- HHCS 3/8-16 UNC x 3/4 ZP             |
| 1G  | 0400482         | 1   | LOCK WASHER 3/8 ZP                         |
| 1H  | 0709877G        | 2   | RAMSEY HD234 VERTICAL ROLLER W/BUSHINGS    |
| 2   | 0308698         | 1   | RAMSEY WINCH HD234 LEVER LOCK MANUAL SHIFT |
| 3   | 0320147         | 1   | WINCH MOTOR 5 CUBIC INCH                   |
| 4   | 03020146        | 1   | RAMSEY ROLLER TENSIONER-HD234              |
| 5   | 0400126         | 8   | BOLT- HHCS 3/8-16 UNC x 1 ZP               |
| 6   | 0400482         | 6   | LOCK WASHER 3/8 ZP                         |
| 7   | 0403137         | 2   | BOLT FHSCS 3/8-16 x 1 GR8                  |
| 8   | 0400480         | 2   | FLAT WASHER 3/8 ZP                         |
| 9   | 0400392         | 2   | NUT NYLOCK 3/8-16 ZP                       |
| 10  | 0400238         | 2   | BOLT SHCS 1/2-13 x 1-1/2 GR8               |
| 11  | 0400491         | 2   | LOCK WASHER 1/2 ZP                         |
| 12  | 0400116         | 1   | SET SCREW SQHD 5/16-18 x 1/2 ZP            |
| 13  | 0805170         | 1   | RAMSEY WINCH CLUTCH CONTROL ROD            |
| 14  | 0301532         | 1   | MILLER T-HANDLE                            |
| 15  | 0400560         | 1   | ROLL PIN 5/32 x 1                          |
| 16  | 0301588         | 1   | ADJUSTABLE YOKE                            |
| 17  | 0400537         | 1   | CLEVIS PIN 1/2 x 1-1/2 ZP                  |
| 18  | 0400492         | 3   | WASHER 1/2 FLAT                            |
| 19  | 0400540         | 1   | COTTER PIN 3/32 x 1                        |
| 20  | 0710918         | 1   | RAMSEY CLUTCH HANDLE MOUNTING ANGLE        |
| 21  | 0805151         | 1   | BELL CRANK ARM                             |
| 22  | 0701172-18      | 2   | SHIM-RAMSEY HD234                          |
| 23  | 0500815         | 1   | WINCH SAFETY DECAL                         |
| 24  | ADPTR2062-08X08 | 2   | ADAPTER 90° ELBOW 8MORB x 8JICM            |
| 25  | 0752167-R       | 1   | S10-16 CNV RAMSEY HD234 FLUID TUBE-SHORT   |
| 26  | 0752168-R       | 1   | S10-16 CNV RAMSEY HD234 FLUID TUBE-LONG    |
| 27  | 0751974-R       | 1   | S12-16 LCG RAMSEY HD234 FLUID TUBE-SHORT   |
| 28  | 0751975-R       | 1   | S12-16 LCG RAMSEY HD234 FLUID TUBE-LONG    |



# Section V - PARTS

## RAMSEY HD234 MANUAL-SHIFT WINCH GROUP WITH DUAL CLUTCH CONTROL ROD ASSEMBLY

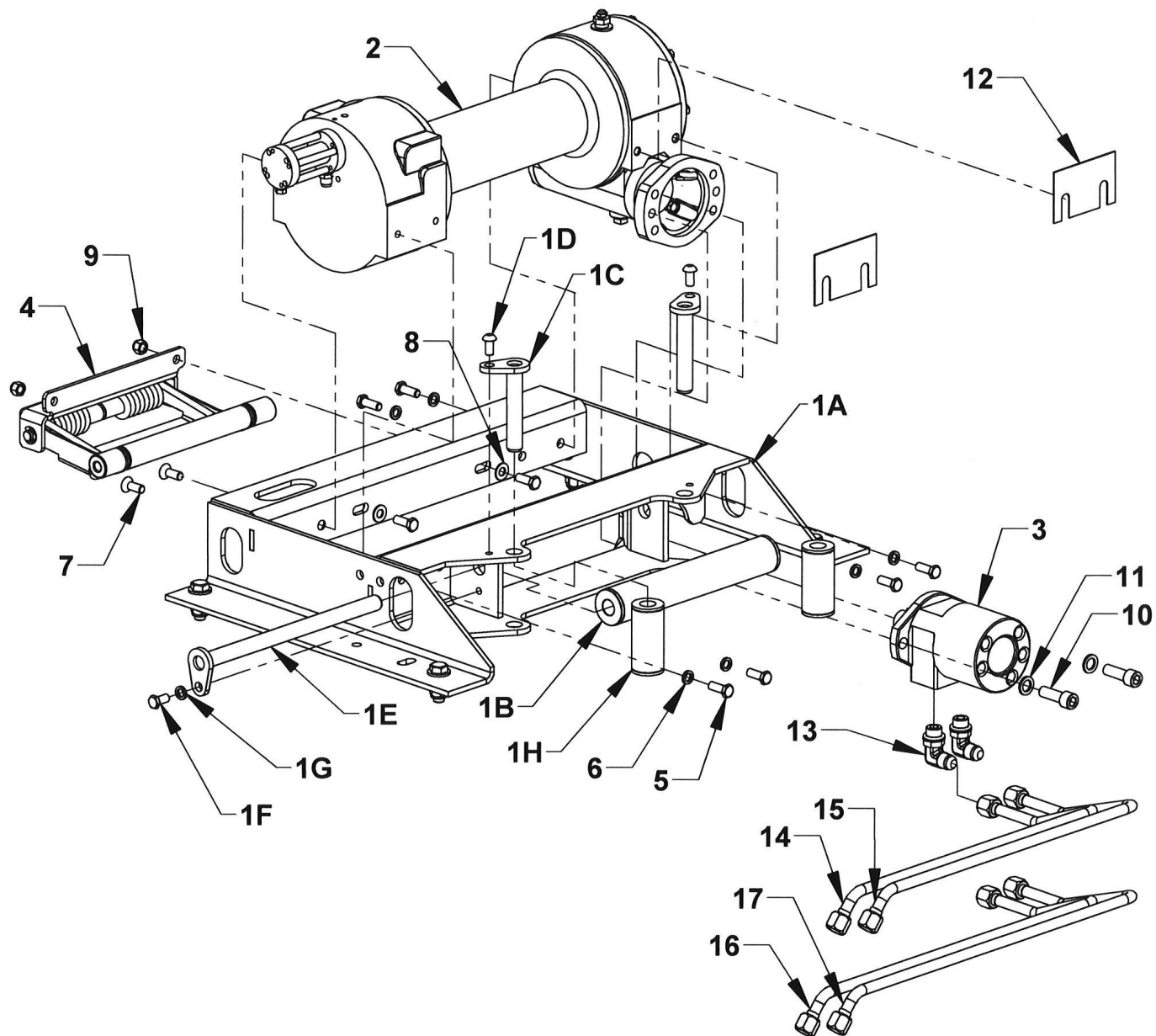


## Section V - PARTS

### RAMSEY HD234 MANUAL-SHIFT WINCH GROUP WITH DUAL CLUTCH CONTROL ROD ASSEMBLY

| REF | PART #          | QTY | DESCRIPTION                                |
|-----|-----------------|-----|--------------------------------------------|
| 1   | 0940425         | 1   | RAMSEY HD234 WINCH MTG FRAME-GEN2          |
| 1A  | 0811139         | 1   | RAMSEY HD234 WINCH MOUNTING FRAME          |
| 1B  | 0940428         | 1   | ROLLER ASSEMBLY - 1-3/4 DIAMETER           |
| 1C  | 0811142         | 2   | VERTICAL ROLLER KEEPER PIN - RAMSEY 8K     |
| 1D  | 0403004         | 2   | BOLT- BHCS 3/8-16 UNC x 3/4 ZP             |
| 1E  | 0811145         | 1   | ROLLER GUIDE KEEPER PIN - RAMSEY 8K WORM   |
| 1F  | 0400121         | 1   | BOLT- HHCS 3/8-16 UNC x 3/4 ZP             |
| 1G  | 0400482         | 1   | LOCK WASHER 3/8 ZP                         |
| 1H  | 0709877G        | 2   | RAMSEY HD234 VERTICAL ROLLER W/BUSHINGS    |
| 2   | 0308698         | 1   | RAMSEY WINCH HD234 LEVER LOCK MANUAL SHIFT |
| 3   | 0320147         | 1   | WINCH MOTOR 5 CUBIC INCH                   |
| 4   | 03020146        | 1   | RAMSEY ROLLER TENSIONER-HD234              |
| 5   | 0400126         | 8   | BOLT- HHCS 3/8-16 UNC x 1 ZP               |
| 6   | 0400482         | 6   | LOCK WASHER 3/8 ZP                         |
| 7   | 0403137         | 2   | BOLT FHSCS 3/8-16 x 1 GR8                  |
| 8   | 0400480         | 2   | FLAT WASHER 3/8 ZP                         |
| 9   | 0400392         | 2   | NUT NYLOC 3/8-16 ZP                        |
| 10  | 0400238         | 2   | BOLT SHCS 1/2-13 x 1-1/2 GR8               |
| 11  | 0400491         | 2   | LOCK WASHER 1/2 ZP                         |
| 12  | 0400116         | 1   | SET SCREW SQHD 5/16-18 x 1/2 ZP            |
| 13  | 08002469        | 1   | DUAL CLUTCH HANDLE ROD - 45"               |
| 14  | 07004181        | 1   | DUAL CLUTCH HANDLE ROD - 19"               |
| 15  | 0301532         | 2   | MILLER T-HANDLE                            |
| 16  | 0403170         | 2   | BOLT SSB #10 x 1 #8-32 SS                  |
| 17  | 0403005         | 4   | FLAT WASHER #10 SS                         |
| 18  | 04003908        | 2   | NUT #8-32 HEX NYLOK SS                     |
| 19  | 0400560         | 2   | ROLL PIN 5/32 x 1                          |
| 20  | 07004182        | 1   | DUAL CLUTCH CONTROL ROD COUPLING           |
| 21  | 08002489        | 1   | DUAL CLUTCH CONTROL ROD BUSHING            |
| 22  | 86062E          | 2   | SNAP RING 5/8 EXTERNAL                     |
| 23  | 04000341        | 1   | CLEVIS PIN 1/2 x 1 ZP                      |
| 24  | 0400540         | 1   | COTTER PIN 3/32 x 1                        |
| 25  | 07004164        | 1   | DUAL CLUTCH HANDLE MTG ANGLE - LH          |
| 26  | 07004165        | 1   | DUAL CLUTCH HANDLE MTG ANGLE - RH          |
| 27  | 08002468        | 1   | DUAL HANDLE CLUTCH CRANK ARM               |
| 28  | 0701172-18      | 2   | SHIM-RAMSEY HD234                          |
| 29  | 05000522L       | 1   | WINCH SAFETY DECAL - LH                    |
| 30  | 0500522R        | 1   | WINCH SAFETY DECAL - RH                    |
| 31  | ADPTR2062-08X08 | 2   | ADAPTER 90° ELBOW 8MORB x 8JICM            |
| 32  | 0752167-R       | 1   | S10-16 CNV RAMSEY HD234 FLUID TUBE-SHORT   |
| 33  | 0752168-R       | 1   | S10-16 CNV RAMSEY HD234 FLUID TUBE-LONG    |
| 34  | 0751974-R       | 1   | S12-16 LCG RAMSEY HD234 FLUID TUBE-SHORT   |
| 35  | 0751975-R       | 1   | S12-16 LCG RAMSEY HD234 FLUID TUBE-LONG    |
| 36  | 03012489        | 2   | SET SCREW COLLAR 5/8 SHAFT                 |

Section V - PARTS  
RAMSEY HD234 AIR-SHIFT WINCH GROUP



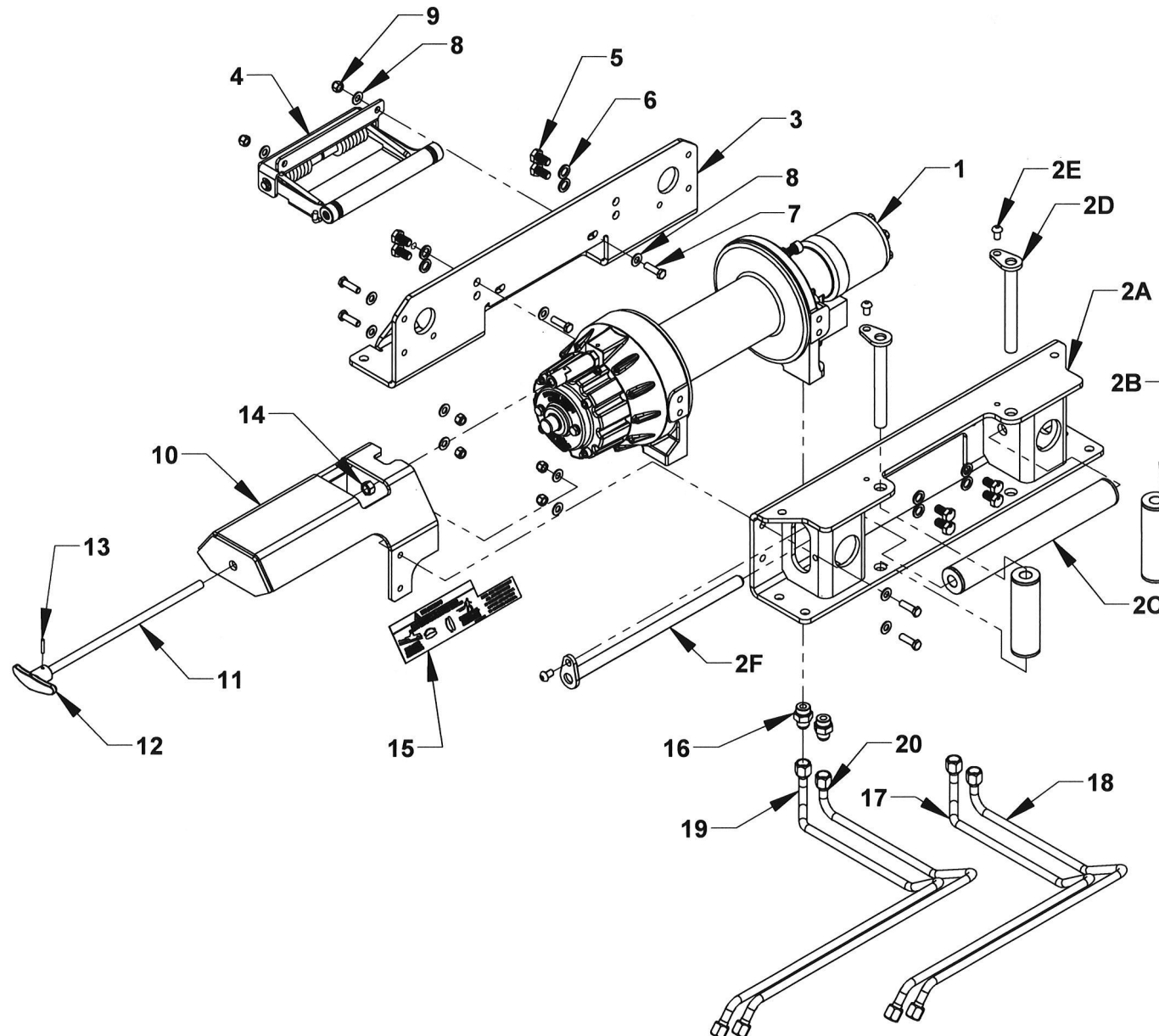
## Section V - PARTS

### RAMSEY HD234 AIR-SHIFT WINCH GROUP

| REF | PART #          | QTY | DESCRIPTION                              |
|-----|-----------------|-----|------------------------------------------|
| 1   | 0940425         | 1   | RAMSEY HD234 WINCH MTG FRAME-GEN2        |
| 1A  | 0811139         | 1   | RAMSEY HD234 WINCH MOUNTING FRAME        |
| 1B  | 0940428         | 1   | ROLLER ASSEMBLY - 1-3/4 DIAMETER         |
| 1C  | 0811142         | 2   | VERTICAL ROLLER KEEPER PIN - RAMSEY 8K   |
| 1D  | 0403004         | 2   | BOLT- BHCS 3/8-16 UNC x 3/4 ZP           |
| 1E  | 0811145         | 1   | ROLLER GUIDE KEEPER PIN - RAMSEY 8K WORM |
| 1F  | 0400121         | 1   | BOLT- HHCS 3/8-16 UNC x 3/4 ZP           |
| 1G  | 0400482         | 1   | LOCK WASHER 3/8 ZP                       |
| 1H  | 0709877G        | 2   | RAMSEY HD234 VERTICAL ROLLER W/BUSHINGS  |
| 2   | 0308535         | 1   | RAMSEY WINCH HD234 SHIFT                 |
| 3   | 0320147         | 1   | WINCH MOTOR 5 CUBIC INCH                 |
| 4   | 03020146        | 1   | RAMSEY ROLLER TENSIONER-HD234            |
| 5   | 0400126         | 8   | BOLT- HHCS 3/8-16 UNC x 1 ZP             |
| 6   | 0400482         | 6   | LOCK WASHER 3/8 ZP                       |
| 7   | 0403137         | 2   | BOLT FHSCS 3/8-16 x 1 GR8                |
| 8   | 0400480         | 2   | FLAT WASHER 3/8 ZP                       |
| 9   | 0400392         | 2   | NUT NYLOCK 3/8-16 ZP                     |
| 10  | 0400238         | 2   | BOLT SHCS 1/2-13 x 1-1/2 GR8             |
| 11  | 0400491         | 2   | LOCK WASHER 1/2 ZP                       |
| 12  | 0701172-18      | 2   | SHIM-RAMSEY HD234                        |
| 13  | ADPTR2062-08X08 | 2   | ADAPTER 90° ELBOW 8MORB x 8JICM          |
| 14  | 0752167-R       | 1   | S10-16 CNV RAMSEY HD234 FLUID TUBE-SHORT |
| 15  | 0752168-R       | 1   | S10-16 CNV RAMSEY HD234 FLUID TUBE-LONG  |
| 16  | 0751974-R       | 1   | S12-16 LCG RAMSEY HD234 FLUID TUBE-SHORT |
| 17  | 0751975-R       | 1   | S12-16 LCG RAMSEY HD234 FLUID TUBE-LONG  |

## Section V - PARTS

### RAMSEY WINCH - 09023899-0810AM 8K OMEGA PLANETARY MANUAL SHIFT



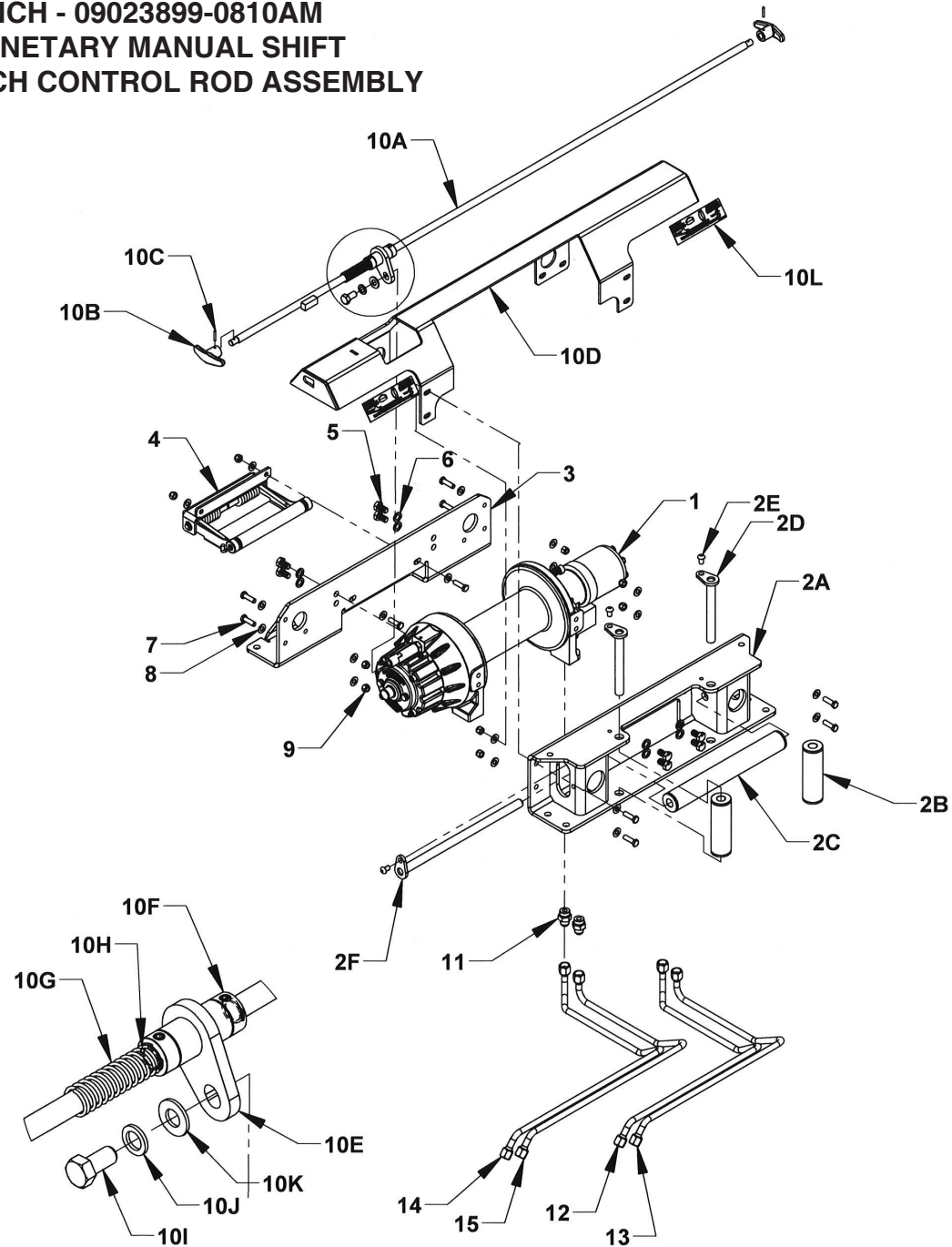
## Section V - PARTS

### RAMSEY WINCH - 09023899-0810AM 8K OMEGA PLANETARY MANUAL SHIFT

| REF | PART #            | QTY | DESCRIPTION                        |
|-----|-------------------|-----|------------------------------------|
| 1   | 03026291-0810AM   | 1   | RAMSEY OMEGA 8K PLANETARY WINCH    |
| 2   | 0940422           | 1   | RAMSEY OMEGA ROLLER GUIDE ASSEMBLY |
| 2A  | 0811127           | 1   | RAMSEY OMEGA ROLLER GUIDE          |
| 2B  | 0809640           | 2   | ROLLER ASSEMBLY - 1.75 DIAMETER    |
| 2C  | A901520           | 1   | ROLLER ASSEMBLY - 1.75 DIAMETER    |
| 2D  | 0809641           | 2   | ROLLER GUIDE KEEPER PIN            |
| 2E  | 0403161           | 3   | BOLT 3/8-16 UNC x 5/8 BUTTON HEAD  |
| 2F  | A901525           | 1   | ROLLER GUIDE KEEPER PIN            |
| 3   | 0811128           | 1   | RAMSEY OMEGA FRONT MTG CHANNEL     |
| 4   | 03025735          | 1   | OMEGA CABLE TENSIONER GEN 2        |
| 5   | 04008448          | 8   | BOLT HHCS M12-1.75X22mm 8.8        |
| 6   | 0400491           | 8   | WASHER 1/2 LOCK                    |
| 7   | 0400122           | 7   | BOLT HHCS 3/8-16 UNC x 1-1/4       |
| 8   | 0400480           | 14  | FLAT WASHER 3/8 SAE ZP             |
| 9   | 0400392           | 7   | NYLON LOCK NUT 3/8-16 UNC          |
| 10  | 08011591          | 1   | RAMSEY OMEGA T-HANDLE SUPPORT BRKT |
| 11  | 0752684           | 1   | RAMSEY OMEGA REMOTE CLUTCH ROD     |
| 12  | 0301532           | 1   | MILLER T- HANDLE                   |
| 13  | 0400560           | 1   | ROLL PIN 5/32 x 1                  |
| 14  | 0400407           | 1   | NUT HEX 1/2                        |
| 15  | 05002123          | 1   | FREE SPOOL DECAL RAMSEY OMEGA      |
| 16  | ADPTR020702-10X08 | 2   | ADAPTER 10MORB x 8JICM             |
| 17  | 0752167-RS12      | 1   | S10-16 CNV OMEGA FLUID TUBE-SHORT  |
| 18  | 0752168-RS12      | 1   | S10-16 CNV OMEGA FLUID TUBE-LONG   |
| 19  | 0751974-RS12      | 1   | S12-16 LCG OMEGA FLUID TUBE-SHORT  |
| 20  | 0751975-RS12      | 1   | S12-16 LCG OMEGA FLUID TUBE-LONG   |

## Section V - PARTS

### RAMSEY WINCH - 09023899-0810AM 8K OMEGA PLANETARY MANUAL SHIFT DUAL HANDLE CLUTCH CONTROL ROD ASSEMBLY





## Section V - PARTS

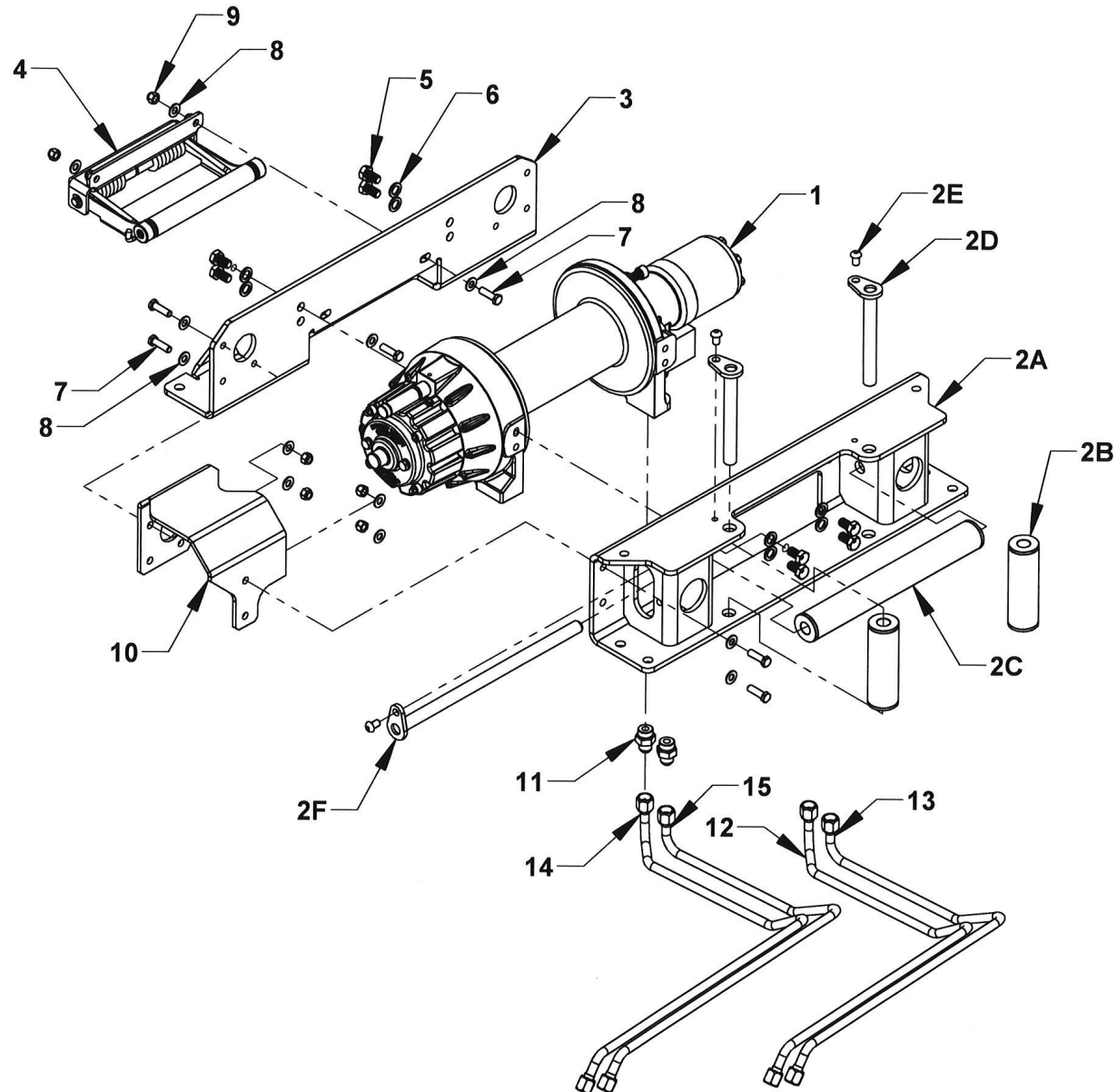
### RAMSEY WINCH - 09023899-0810AM 8K OMEGA PLANETARY MANUAL SHIFT DUAL HANDLE CLUTCH CONTROL ROD ASSEMBLY

| REF | PART #            | QTY | DESCRIPTION                                         |
|-----|-------------------|-----|-----------------------------------------------------|
| 1   | 0320127-0810AM    | 1   | RAMSEY OMEGA 8K PLANETARY WINCH                     |
| 2   | 0940422           | 1   | RAMSEY ROLLER GUIDE ASSEMBLY                        |
| 2A  | 0811127           | 1   | RAMSEY ROLLER GUIDE                                 |
| 2B  | 0809640           | 2   | ROLLER ASSEMBLY - 1.75 DIAMETER                     |
| 2C  | A901520           | 1   | ROLLER ASSEMBLY - 1.75 DIAMETER                     |
| 2D  | 0809641           | 2   | ROLLER GUIDE KEEPER PIN                             |
| 2E  | 0403161           | 3   | BOLT 3/8-16 UNC x 5/8 BUTTON HEAD                   |
| 2F  | A901525           | 1   | ROLLER GUIDE KEEPER PIN                             |
| 3   | 0811128           | 1   | RAMSEY FRONT MTG CHANNEL                            |
| 4   | 03025735          | 1   | OMEGA CABLE TENSIONER                               |
| 5   | 04008448          | 8   | BOLT HHCS M12-1.75X22mm 8.8                         |
| 6   | 0400491           | 8   | WASHER 1/2 LOCK                                     |
| 7   | 0400122           | 10  | BOLT HHCS 3/8-16 UNC x 1-1/4                        |
| 8   | 0400480           | 20  | FLAT WASHER 3/8 SAE ZP                              |
| 9   | 0400392           | 10  | NYLON LOCK NUT 3/8-16 UNC                           |
| 10  | 09022538          | 1   | OMEGA DUAL HANDLE FREE SPOOL ASSEMBLY               |
| 10A | 08009068          | 1   | OMEGA DUAL HANDLE CONTROL ROD - 64"                 |
| 10B | 0301532           | 2   | MILLER T- HANDLE                                    |
| 10C | 0400560           | 2   | ROLL PIN 5/32 x 1                                   |
| 10D | 08019903          | 1   | OMEGA T-HANDLE SUPPORT BRACKET                      |
| 10E | 08019921          | 1   | DUAL HANDLE KEEPER BUSHING                          |
| 10F | 03012489          | 2   | SET SCREW COLLAR 5/8 SHAFT, 5/16-18 x 1/4 SET SCREW |
| 10G | 03012928          | 1   | SPRING COMPRESSION 3 x .875 OD x .091" WIRE DIA.    |
| 10H | 86062E            | 2   | SNAP RING 5/8 EXTERNAL                              |
| 10I | 0400176           | 1   | BOLT HHS 1/2-13 UNC x 1                             |
| 10J | 0400491           | 2   | WASHER 1/2 LOCK                                     |
| 10K | 0403040           | 1   | FLAT WASHER 1/2 SAE ZP                              |
| 10L | 05001603          | 2   | FREE SPOOL DECAL RAMSEY DUAL HANDLE                 |
| 11  | ADPTR020702-10X08 | 1   | ADAPTER 10MORB x 8JICM                              |
| 12  | 0752167-RS12      | 1   | S10-16 CNV OMEGA FLUID TUBE-SHORT                   |
| 13  | 0752168-RS12      | 1   | S10-16 CNV OMEGA FLUID TUBE-LONG                    |
| 14  | 0751974-RS12      | 1   | S12-16 LCG OMEGA FLUID TUBE-SHORT                   |
| 15  | 0751975-RS12      | 1   | S12-16 LCG OMEGA FLUID TUBE-LONG                    |



## Section V - PARTS

### RAMSEY WINCH - 09023899-0810AA 8K OMEGA PLANETARY AIR SHIFT



## Section V - PARTS

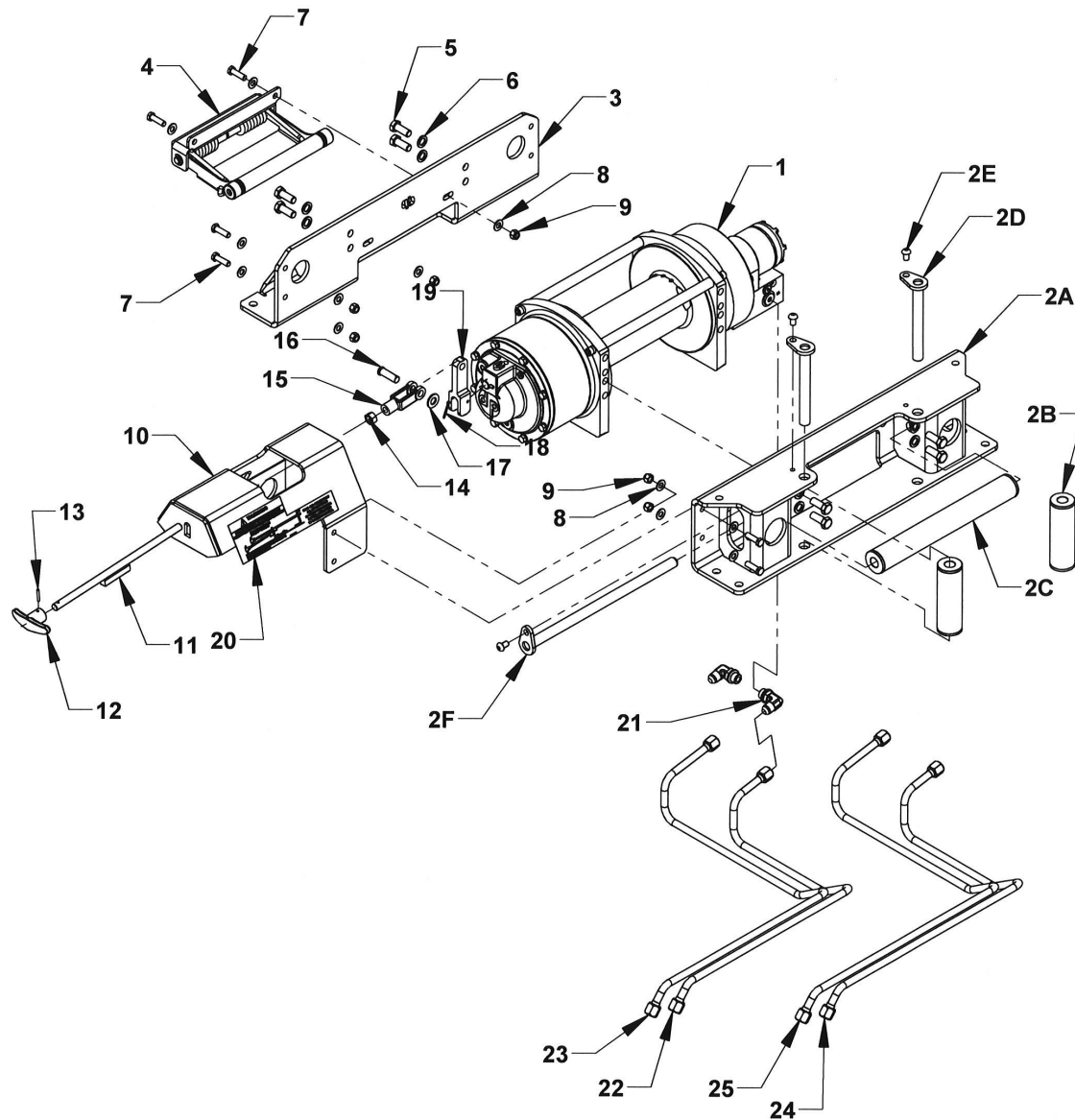
### RAMSEY WINCH - 09023899-0810AA 8K OMEGA PLANETARY AIR SHIFT

| REF | PART #            | QTY | DESCRIPTION                       |
|-----|-------------------|-----|-----------------------------------|
| 1   | 03026291-0810AA   | 1   | RAMSEY OMEGA 8K PLANETARY WINCH   |
| 2   | 0940422           | 1   | RAMSEY ROLLER GUIDE ASSEMBLY      |
| 2A  | 0811127           | 1   | RAMSEY ROLLER GUIDE               |
| 2B  | 0809640           | 2   | ROLLER ASSEMBLY - 1.75 DIAMETER   |
| 2C  | A901520           | 1   | ROLLER ASSEMBLY - 1.75 DIAMETER   |
| 2D  | 0809641           | 2   | ROLLER GUIDE KEEPER PIN           |
| 2E  | 0403161           | 3   | BOLT 3/8-16 UNC x 5/8 BUTTON HEAD |
| 2F  | A901525           | 1   | ROLLER GUIDE KEEPER PIN           |
| 3   | 0811128           | 1   | RAMSEY FRONT MTG CHANNEL          |
| 4   | 03025735          | 1   | OMEGA CABLE TENSIONER GEN 2       |
| 5   | 04008448          | 8   | BOLT HHCS M12-1.75X22mm 8.8       |
| 6   | 0400491           | 8   | WASHER 1/2 LOCK                   |
| 7   | 0400122           | 7   | BOLT HHCS 3/8-16 UNC x 1-1/4      |
| 8   | 0400480           | 14  | FLAT WASHER 3/8 SAE ZP            |
| 9   | 0400392           | 7   | NYLON LOCK NUT 3/8-16 UNC         |
| 10  | 07005433          | 1   | RAMSEY AIR CYLINDER GUARD         |
| 11  | ADPTR020702-10X08 | 2   | ADAPTER 10MORB x 8 JICM           |
| 12  | 0752167-RS12      | 1   | S10-16 CNV OMEGA FLUID TUBE-SHORT |
| 13  | 0752168-RS12      | 1   | S10-16 CNV OMEGA FLUID TUBE-LONG  |
| 14  | 0751974-RS12      | 1   | S12-16 LCG OMEGA FLUID TUBE-SHORT |
| 15  | 0751975-RS12      | 1   | S12-16 LCG OMEGA FLUID TUBE-LONG  |

## Section V - PARTS

DP WINCH - 09013369-0810AM

8K DP PLANETARY MANUAL SHIFT



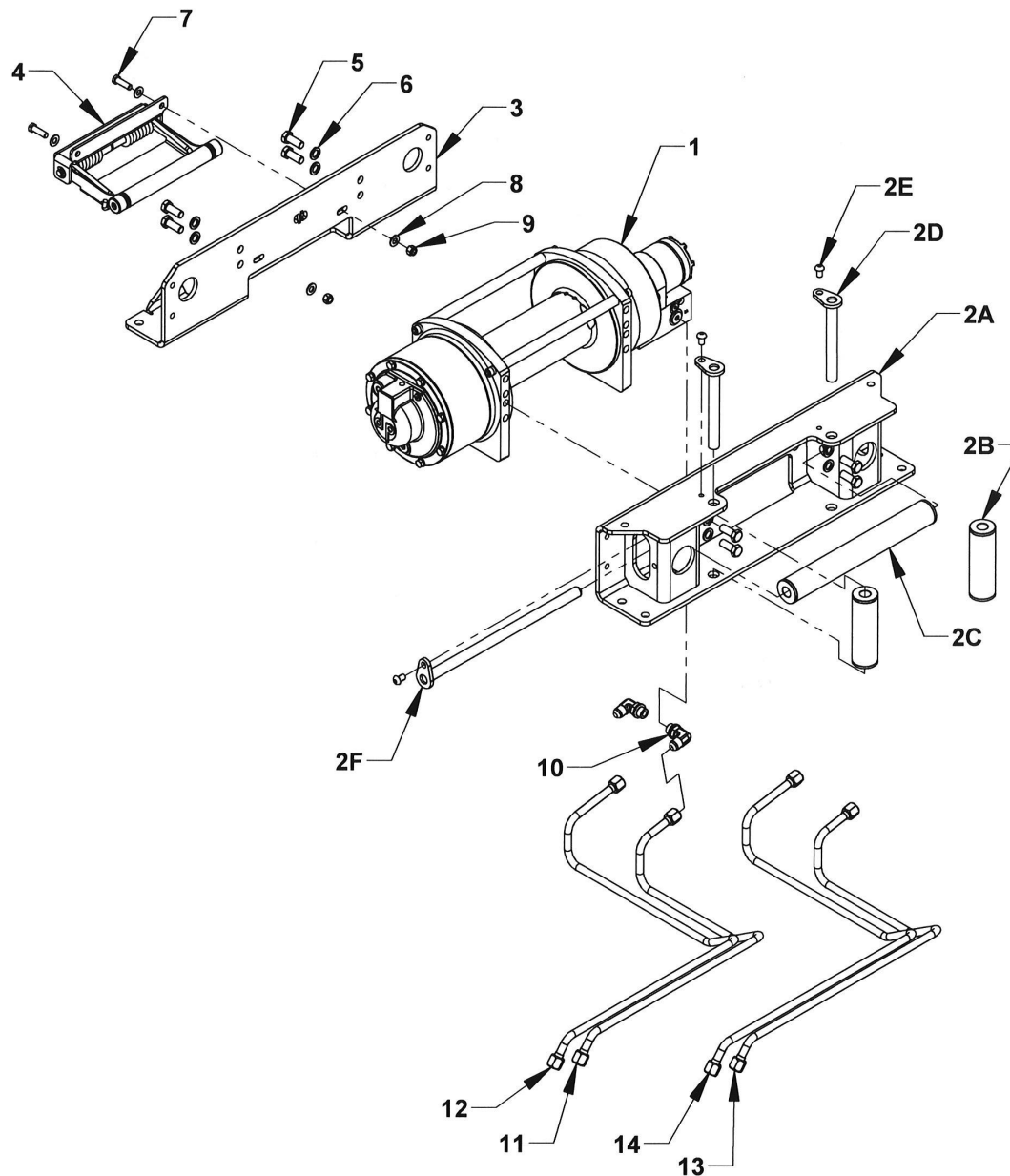
## Section V - PARTS

### DP WINCH - 09013369-0810AM 8K DP PLANETARY MANUAL SHIFT

| REF | PART #                                                | QTY | DESCRIPTION                                                                                                      |
|-----|-------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------|
| 1   | 03015100-0810AM<br>03015100-1210AM<br>03015100-1510AM | 1   | DP 8K PLANETARY WINCH MANUAL SHIFT<br>DP 12K PLANETARY WINCH MANUAL SHIFT<br>DP 15K PLANETARY WINCH MANUAL SHIFT |
| 2   | 09011914                                              | 1   | DP 8K-15K ROLLER GUIDE FRAME ASSEMBLY                                                                            |
| 2A  | 08010128                                              | 1   | DP 8K-15K ROLLER GUIDE FRAME                                                                                     |
| 2B  | 0809640                                               | 2   | ROLLER ASSEMBLY 1.75 DIAMETER x 5.625                                                                            |
| 2C  | A901520                                               | 1   | ROLLER ASSEMBLY 1.75 DIAMETER x 13.500                                                                           |
| 2D  | 0809641                                               | 2   | ROLLER GUIDE KEEPER PIN 6.348                                                                                    |
| 2E  | 0403161                                               | 3   | BOLT 3/8-16 UNC x 5/8 BUTTON HEAD                                                                                |
| 2F  | A901525                                               | 1   | ROLLER GUIDE KEEPER PIN 14.535                                                                                   |
| 3   | 08010129                                              | 1   | DP FRONT MOUNTING FRAME                                                                                          |
| 4   | 03015381                                              | 1   | DP WINCH TENSIONER                                                                                               |
| 5   | 0400177                                               | 8   | BOLT HHCS 1/2-13 UNC x 1-1/4                                                                                     |
| 6   | 0400491                                               | 8   | LOCK WASHER 1/2                                                                                                  |
| 7   | 0400122                                               | 6   | BOLT HHCS 3/8-16 UNC 1-1/4                                                                                       |
| 8   | 0400480                                               | 12  | FLAT WASHER 3/8                                                                                                  |
| 9   | 1400392                                               | 6   | NYLON LOCK NUT 3/8-16 UNC                                                                                        |
| 10  | 08011569                                              | 1   | DP T-HANDLE SUPPORT BRACKET                                                                                      |
| 11  | 08011568                                              | 1   | DP T-HANDLE CLUTCH ROD                                                                                           |
| 12  | 0301532                                               | 1   | MILLER T-HANDLE                                                                                                  |
| 13  | 0400560                                               | 1   | ROLL PIN 5/32 x 1                                                                                                |
| 14  | 0400407                                               | 1   | NUT HEX 1/2                                                                                                      |
| 15  | 0301588                                               | 1   | CLUTCH CONTROL ADJUSTABLE YOKE                                                                                   |
| 16  | 0400537                                               | 1   | CLEVIS PIN 1/2 x 1-1/2                                                                                           |
| 17  | 0403040                                               | 1   | FLAT WASHER 1/2                                                                                                  |
| 18  | 0400540                                               | 1   | COTTER PIN 3/32 x 1                                                                                              |
| 19  | 03017221                                              | 1   | DP WINCH LEVER                                                                                                   |
| 20  | 0500815                                               | 1   | WINCH SAFETY DECAL                                                                                               |
| 21  | ADPTR2062-08X08                                       | 2   | ADAPTER 90° ELBOW 8MORB x 8JICM                                                                                  |
| 22  | 0752167-DP08                                          | 1   | S10-16 CNV DP FLUID TUBE-SHORT                                                                                   |
| 23  | 0752168-DP08                                          | 1   | S10-16 CNV DP FLUID TUBE-LONG                                                                                    |
| 24  | 0751974-DP08                                          | 1   | S12-16 LCG DP FLUID TUBE-SHORT                                                                                   |
| 25  | 0751975-DP08                                          | 1   | S12-16 LCG DP FLUID TUBE-LONG                                                                                    |

NOTE: Items 21 through 25 are not included in 09013369-0810AM.

**Section V - PARTS**  
**DP WINCH - 09013369-0810AA**  
**8K DP PLANETARY AIR SHIFT**



## Section V - PARTS

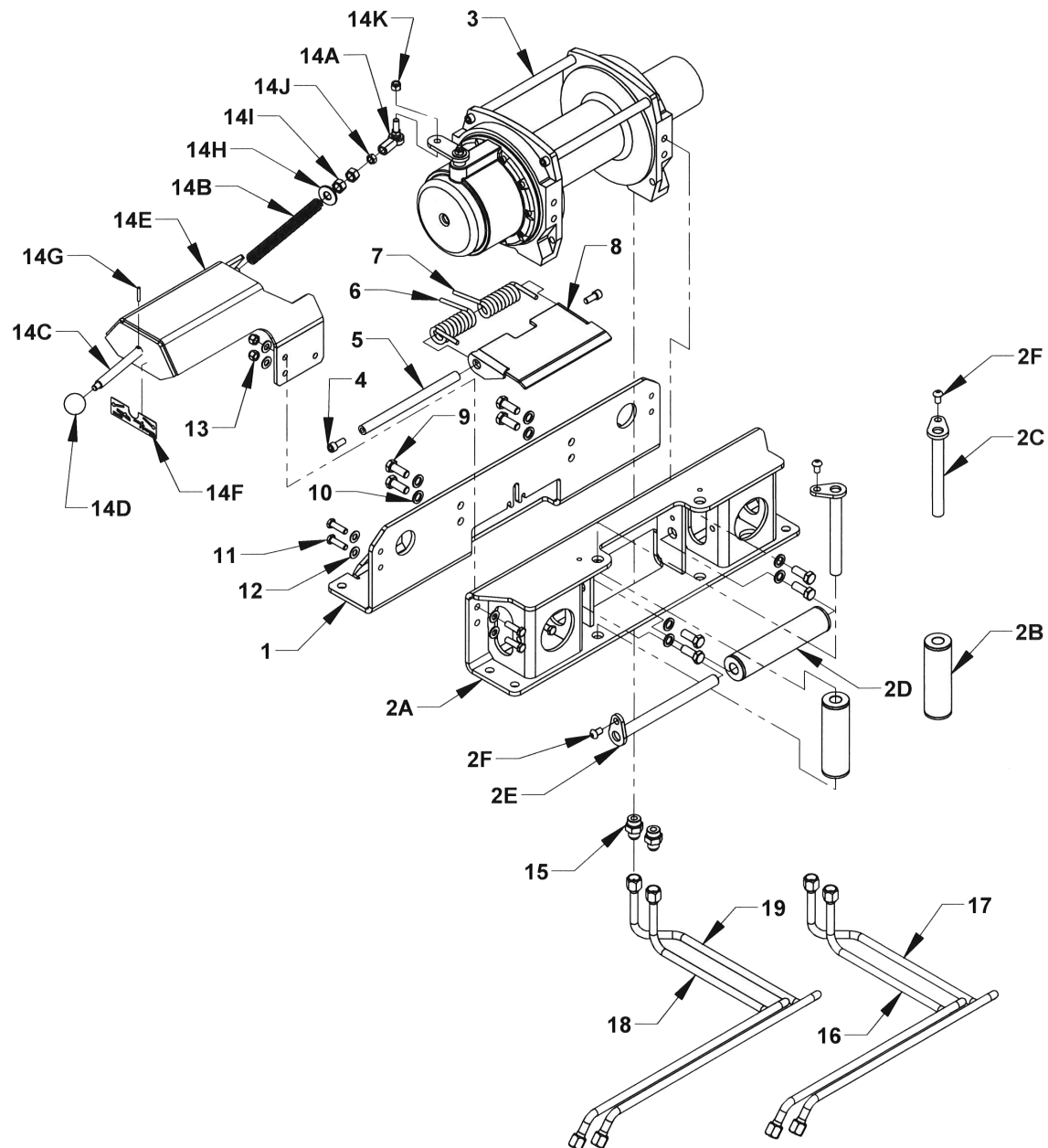
### DP WINCH - 09013369-0810AA

### 8K DP PLANETARY AIR SHIFT

| REF | PART #                                                | QTY | DESCRIPTION                                                                                             |
|-----|-------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------|
| 1   | 03015100-0810AA<br>03015100-1210AA<br>03015100-1510AA | 1   | DP 8K PLANETARY WINCH AIR SHIFT<br>DP 12K PLANETARY WINCH AIR SHIFT<br>DP 15K PLANETARY WINCH AIR SHIFT |
| 2   | 09011914                                              | 1   | DP 8K-15K ROLLER GUIDE FRAME ASSEMBLY                                                                   |
| 2A  | 08010128                                              | 1   | DP 8K-15K ROLLER GUIDE FRAME                                                                            |
| 2B  | 0809640                                               | 2   | ROLLER ASSEMBLY 1.75 DIAMETER x 5.625                                                                   |
| 2C  | A901520                                               | 1   | ROLLER ASSEMBLY 1.75 DIAMETER x 13.500                                                                  |
| 2D  | 0809641                                               | 2   | ROLLER GUIDE KEEPER PIN 6.348                                                                           |
| 2E  | 0403161                                               | 3   | BOLT 3/8-16 UNC x 5/8 BUTTON HEAD                                                                       |
| 2F  | A901525                                               | 1   | ROLLER GUIDE KEEPER PIN 14.535                                                                          |
| 3   | 08010129                                              | 1   | DP FRONT MOUNTING FRAME                                                                                 |
| 4   | 03015381                                              | 1   | DP WINCH TENSIONER                                                                                      |
| 5   | 0400177                                               | 8   | BOLT HHCS 1/2-13 UNC x 1-1/4                                                                            |
| 6   | 0400491                                               | 8   | LOCK WASHER 1/2                                                                                         |
| 7   | 0400122                                               | 2   | BOLT HHCS 3/8-16 UNC x 1-1/4                                                                            |
| 8   | 0400480                                               | 4   | FLAT WASHER 3/8                                                                                         |
| 9   | 1400392                                               | 2   | NYLON LOCK NUT 3/8-16 UNC                                                                               |
| 10  | ADPTR2062-08X08                                       | 2   | ADAPTER 90° ELBOW 8MORB x 8JICM                                                                         |
| 11  | 0752167-DP08                                          | 1   | S10-16 CNV DP FLUID TUBE-SHORT                                                                          |
| 12  | 0752168-DP08                                          | 1   | S10-16 CNV DP FLUID TUBE-LONG                                                                           |
| 13  | 0751974-DP08                                          | 1   | S12-16 LCG DP FLUID TUBE-SHORT                                                                          |
| 14  | 0751975-DP08                                          | 1   | S12-16 LCG DP FLUID TUBE-LONG                                                                           |

NOTE: Items 11 through 14 are not included in 09013369-0810AM.

**Section V - PARTS**  
**WARN WINCH - MANUAL FREE SPOOL**



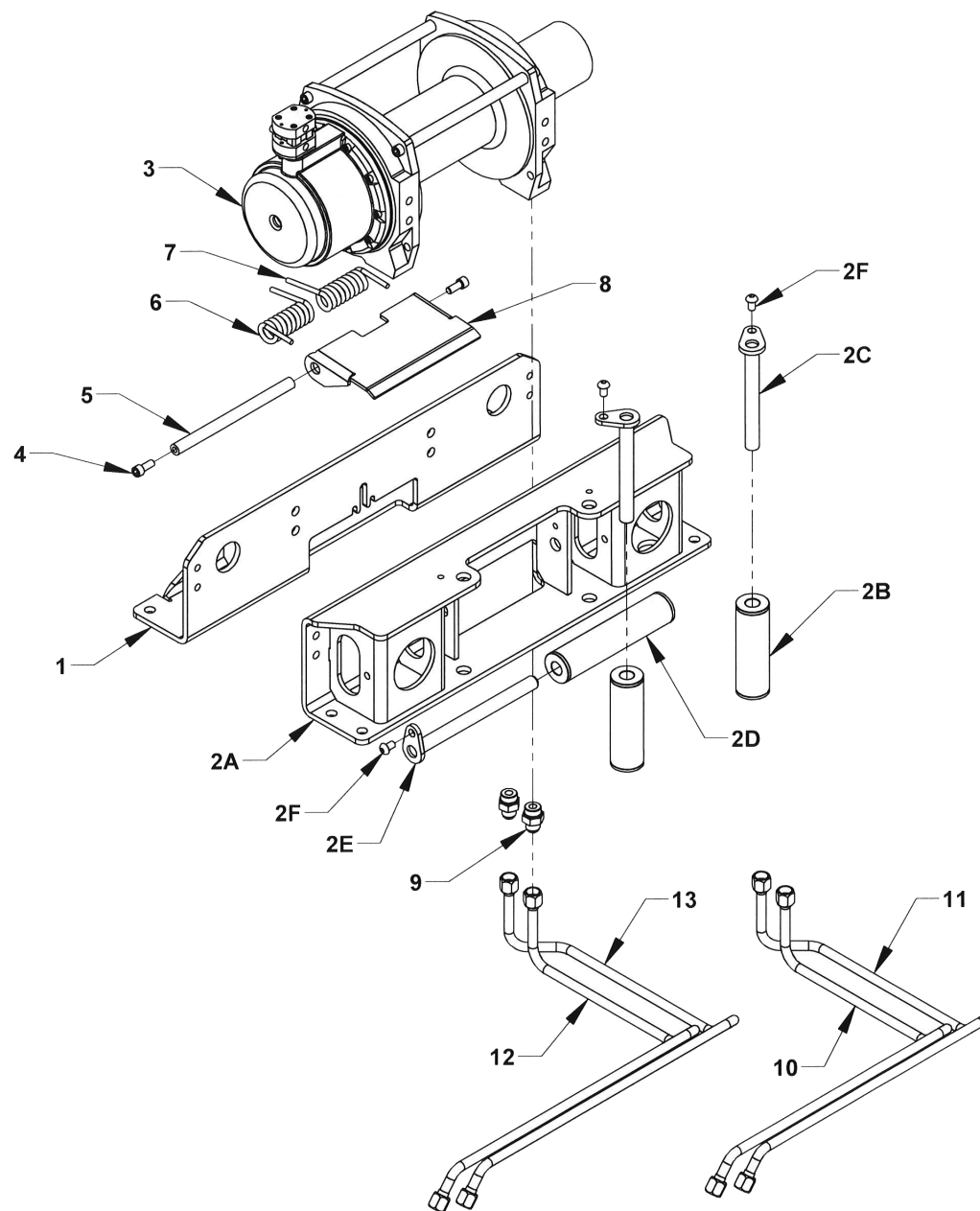
## Section V - PARTS

### WARN WINCH - MANUAL FREE SPOOL

| REF | PART #            | QTY | DESCRIPTION                          |
|-----|-------------------|-----|--------------------------------------|
| 1   | 0809644           | 1   | MTG FRAME WELDMENT - FRONT           |
| 2   | 0940240           | 1   | WARN MTG FRAME REAR ASSEMBLY         |
| 2A  | 0809639           | 1   | MTG FRAME WLDMNT - ROLLER GUIDE REAR |
| 2B  | 0809640           | 2   | ROLLER GUIDE BUSHING 1.75 x 5.625    |
| 2C  | 0809641           | 2   | ROLLER GUIDE KEEPER PIN              |
| 2D  | A9R281            | 1   | ROLLER GUIDE BUSHING 1.75 x 7.875    |
| 2E  | A902095           | 1   | ROLLER GUIDE KEEPER PIN              |
| 2F  | 0403161           | 3   | BOLT, BHCS 3/8-16 UNC x 5/8          |
| 3   | 0308936-0908AM    | 1   | WINCH 9K, 8 IN. DRUM MANUAL SHIFT    |
|     | 0308936-1208AM    |     | WINCH 12K, 8 IN. DRUM MANUAL SHIFT   |
|     | 0308936-1508AM    |     | WINCH 15K, 8 IN. DRUM MANUAL SHIFT   |
| 4   | 0403109           | 2   | BOLT, SHCS 3/8-16 UNC x 7/8          |
| 5   | 0751337           | 1   | TENSION PLATE PIVOT ROD              |
| 6   | 0308935R          | 1   | TENSION SPRING                       |
| 7   | 0308935L          | 1   | TENSION SPRING                       |
| 8   | 0751268           | 1   | TENSION PLATE                        |
| 9   | 0400177           | 8   | BOLT HHCS 1/2-13 UNC x 1-1/4         |
| 10  | 0400491           | 8   | LOCK WASHER 1/2                      |
| 11  | 0400122           | 5   | BOLT HHCS 3/8-16 UNC x 1-1/4         |
| 12  | 0400480           | 10  | FLAT WASHER 3/8                      |
| 13  | 0400392           | 5   | NYLON LOCK NUT 3/8-16 UNC            |
| 14  | 09013709          | 1   | CLUTCH CONTROL ASSEMBLY WARN WINCH   |
| 14A | 718732            | 1   | ROD END BEARING                      |
| 14B | 71875             | 1   | WINCH SPRING                         |
| 14C | 71873             | 1   | WINCH CLUTCH ROD                     |
| 14D | 718731            | 1   | WINCH CLUTCH ROD KNOB                |
| 14E | 08011592          | 1   | WINCH-MANUAL FREE SPOOL BRACKET      |
| 14F | 05002124          | 1   | FREE SPOOL DECAL WARN WINCH          |
| 14G | 0405559           | 1   | SPLIT PIN 3/16 x 1                   |
| 14H | 0400492           | 1   | FLAT WASHER 1/2                      |
| 14I | 0400407           | 2   | HEX NUT 1/2-13 UNC                   |
| 14J | 0402122           | 1   | HEX NUT 3/8-16 UNC                   |
| 14K | 0400392           | 1   | NYLON LOCK NUT 3/8-16 UNC            |
| 15  | ADPTR202702-10X08 | 2   | ADAPTER 10MORB x 8JICM               |
| 16  | 0752167-W         | 1   | S10-16 CNV WARN FLUID TUBE-SHORT     |
| 17  | 0752168-W         | 1   | S10-16 CNV WARN FLUID TUBE-LONG      |
| 18  | 0751974-W         | 1   | S12-16 LCG WARN FLUID TUBE-SHORT     |
| 19  | 0751975-W         | 1   | S12-16 LCG WARN FLUID TUBE-LONG      |



**Section V - PARTS**  
**WARN WINCH - AIR FREE SPOOL**



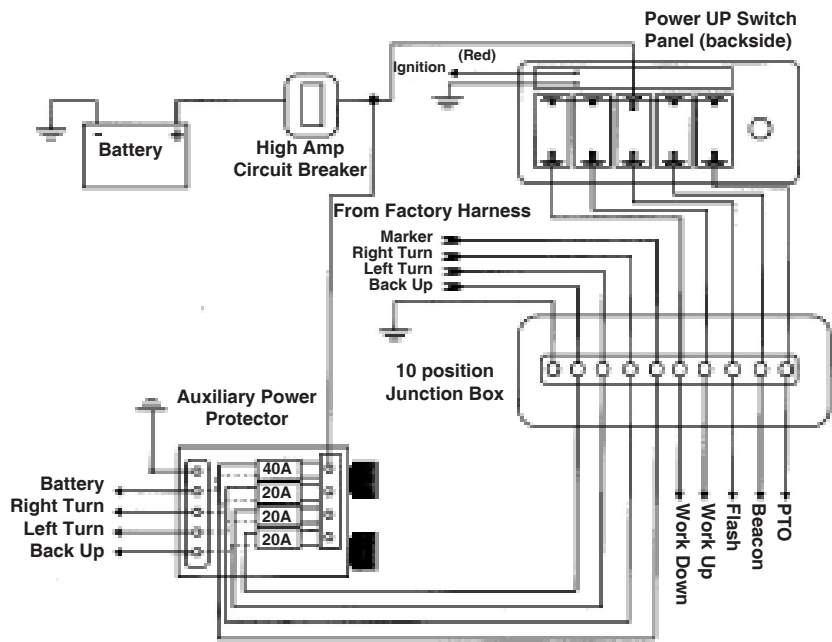
## Section V - PARTS

### WARN WINCH - AIR FREE SPOOL

| REF | PART #         | QTY | DESCRIPTION                          |
|-----|----------------|-----|--------------------------------------|
| 1   | 0809644        | 1   | MTG FRAME WELDMENT - FRONT           |
| 2   | 0940240        | 1   | WARN MTG FRAME REAR ASSEMBLY         |
| 2A  | 0809639        | 1   | MTG FRAME WLDMNT - ROLLER GUIDE REAR |
| 2B  | 0809640        | 2   | ROLLER GUIDE BUSHING 1.75 x 5.625    |
| 2C  | 0809641        | 2   | ROLLER GUIDE KEEPER PIN              |
| 2D  | A9R281         | 1   | ROLLER GUIDE BUSHING 1.75 x 7.875    |
| 2E  | A902095        | 1   | ROLLER GUIDE KEEPER PIN              |
| 2F  | 0403161        | 3   | BOLT, BHCS 3/8-16 UNC x 5/8          |
| 3   | 0308936-0908AA | 1   | WINCH 9K, 8 IN. DRUM AIR SHIFT       |
|     | 0308936-1208AA | 1   | WINCH 12K, 8 IN. DRUM AIR SHIFT      |
|     | 0308936-1508AA | 1   | WINCH 15K, 8 IN. DRUM AIR SHIFT      |
| 4   | 0403109        | 2   | BOLT, SHCS 3/8-16 UNC x 7/8          |
| 5   | 0751337        | 1   | TENSION PLATE PIVOT ROD              |
| 6   | 0308935R       | 1   | TENSION SPRING                       |
| 7   | 0308935L       | 1   | TENSION SPRING                       |
| 8   | 0751268        | 1   | TENSION PLATES                       |
| 9   | 0752167-W      | 1   | S10-16 CNV WARN FLUID TUBE-SHORT     |
| 10  | 0752168-W      | 1   | S10-16 CNV WARN FLUID TUBE-LONG      |
| 11  | 0751974-W      | 1   | S12-16 LCG WARN FLUID TUBE-SHORT     |
| 12  | 0751975-W      | 1   | S12-16 LCG WARN FLUID TUBE-LONG      |

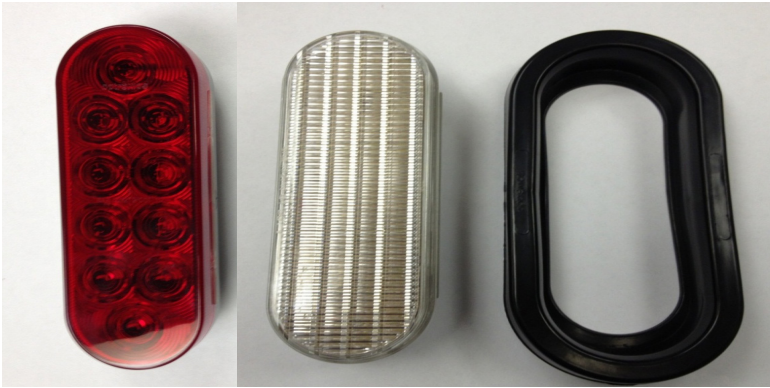
Section V - PARTS

OPTIONAL DASHBOARD PANEL

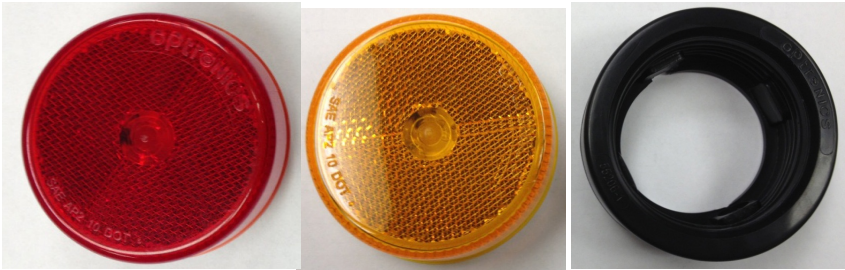


Section V - PARTS

LIGHT KIT



| REF. NO. | PART NUMBER | DESCRIPTION                       |
|----------|-------------|-----------------------------------|
| 1        | 0311498     | LIGHT 6" OVAL RED LED - STOP/TURN |
| 2        | 0311500     | LIGHT 6" OVAL REVERSE LED         |
| 3        | 3011503     | LIGHT 6" GROMMET                  |



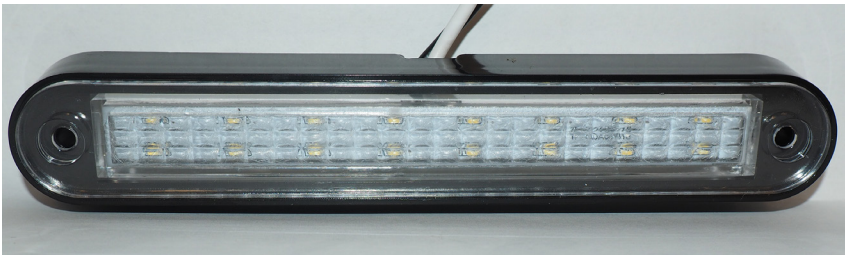
| REF. NO. | PART NUMBER | DESCRIPTION                           |
|----------|-------------|---------------------------------------|
| 1        | 0311512     | LIGHT 2.5" RED REFLEX LED (MCL59RB)   |
| 2        | 0311513     | LIGHT 2.5" AMBER REFLEX LED (MCL59AB) |
| 3        | 0311516     | LIGHT 2.5" GROMMET                    |

Section V - PARTS

LIGHT KIT



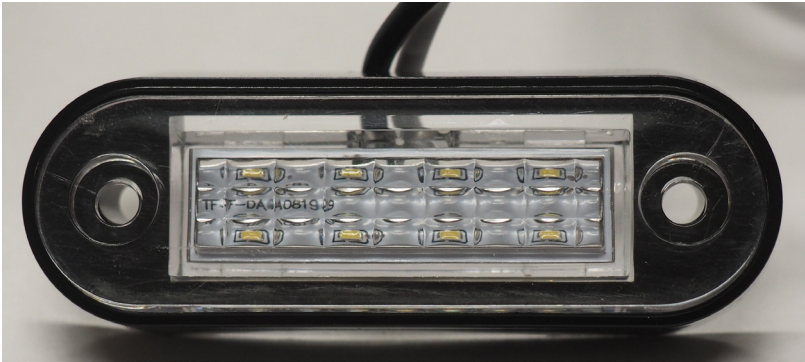
| REF. NO. | PART NUMBER | DESCRIPTION                                   |
|----------|-------------|-----------------------------------------------|
| 1        | 0311514     | LIGHT 2.5" ROUND CLEAR/RED LED MARKER LIGHT   |
| 2        | 0311515     | LIGHT 2.5" ROUND CLEAR/AMBER LED MARKER LIGHT |
| 3        | 3011516     | LIGHT 2.5" GROMMET                            |



| REF. NO. | PART NUMBER | DESCRIPTION                     |
|----------|-------------|---------------------------------|
| 1        | 0320162     | 6 IN. CONTROL STATION LED LIGHT |

Section V - PARTS

LIGHT KIT & PRESSURE GAUGE



| REF. NO. | PART NUMBER | DESCRIPTION                     |
|----------|-------------|---------------------------------|
| 1        | 0320161     | 3 IN. CONTROL STATION LED LIGHT |



| REF. NO. | PART NUMBER | DESCRIPTION                    |
|----------|-------------|--------------------------------|
| 1        | 0320157     | 2 IN. HYDRAULIC PRESSURE GAUGE |

Section V - PARTS

LIGHT KIT



| REF. NO. | PART NUMBER | DESCRIPTION           |
|----------|-------------|-----------------------|
| 1        | 0311519     | RED 3/4 LED ICC LIGHT |



| REF. NO. | PART NUMBER | DESCRIPTION       |
|----------|-------------|-------------------|
| 1        | 0311520     | RED 3/4 LED LIGHT |



Section V - PARTS

LIGHT KIT



| REF. NO. | PART NUMBER | DESCRIPTION               |
|----------|-------------|---------------------------|
| 1        | 0311521     | AMBER 3/4 ROUND LED LIGHT |



| REF. NO. | PART NUMBER | DESCRIPTION                   |
|----------|-------------|-------------------------------|
| 1        | 0311522     | CLEAR/RED 3/4 ROUND LED LIGHT |



| REF. NO. | PART NUMBER | DESCRIPTION                     |
|----------|-------------|---------------------------------|
| 1        | 0311523     | CLEAR/AMBER 3/4 ROUND LED LIGHT |



Section V - PARTS

LIGHT KIT



| REF. NO. | PART NUMBER | DESCRIPTION                 |
|----------|-------------|-----------------------------|
| 1        | 0308359     | MARKER LIGHT RED REFLEX LED |



| REF. NO. | PART NUMBER | DESCRIPTION                   |
|----------|-------------|-------------------------------|
| 1        | 0308360     | MARKER LIGHT AMBER REFLEX LED |

**Section V - PARTS**  
**LIGHT KIT**



| REF. NO. | PART NUMBER | DESCRIPTION                         |
|----------|-------------|-------------------------------------|
| 1        | 0312578     | MILLENNIUM MARKER LIGHT CLEAR/AMBER |



| REF. NO. | PART NUMBER | DESCRIPTION                       |
|----------|-------------|-----------------------------------|
| 1        | 0312579     | MILLENNIUM MARKER LIGHT CLEAR/RED |

Section V - PARTS

LIGHT KIT



| REF. NO. | PART NUMBER | DESCRIPTION       |
|----------|-------------|-------------------|
| 1        | 0308491     | REFLECTOR - AMBER |



| REF. NO. | PART NUMBER | DESCRIPTION     |
|----------|-------------|-----------------|
| 1        | 0308490     | REFLECTOR - RED |

Section V - PARTS

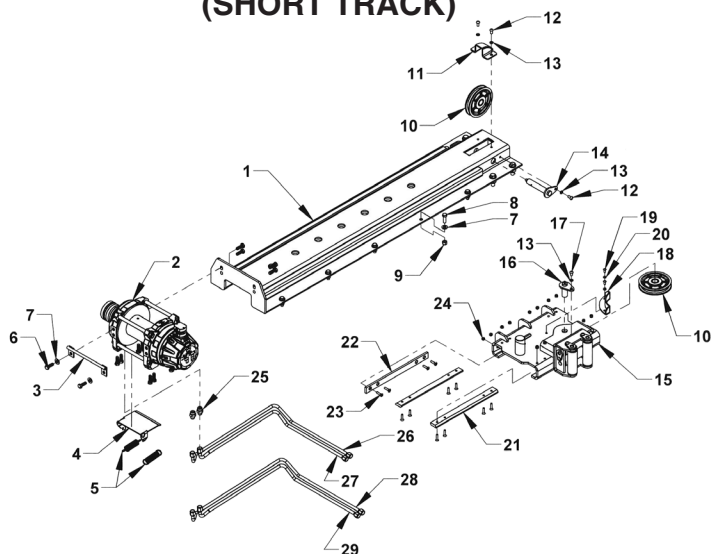
LIGHT KIT



| REF. NO. | PART NUMBER | DESCRIPTION                        |
|----------|-------------|------------------------------------|
| 1        | 0311510     | RECTANGULAR REFLEX BACK UP         |
| 1        | 0311511     | RECTANGULAR REFLEX BACK UP GROMMET |

# Section V - PARTS

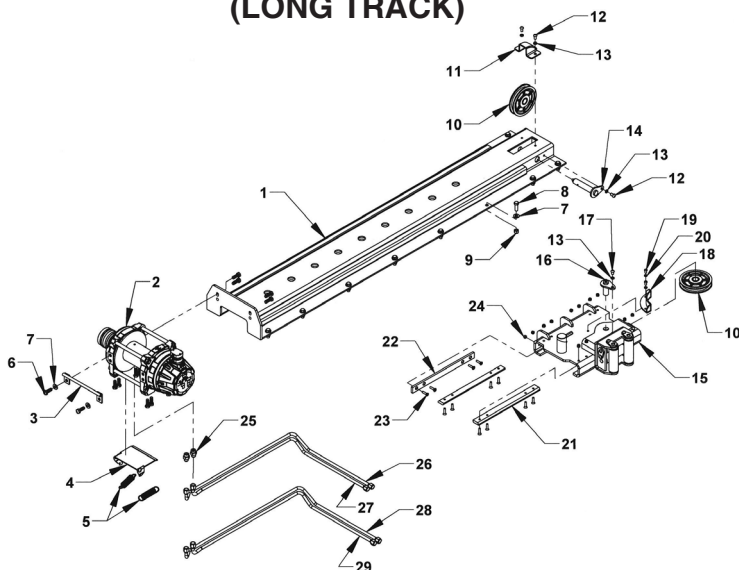
## MANUAL SLIDEWINDER (SHORT TRACK)



| REF | PART #            | QTY | DESCRIPTION                                 |
|-----|-------------------|-----|---------------------------------------------|
| 1   | 315210            | 1   | SLIDE TRACK - SHORT                         |
| 2   | 711096            | 1   | SERIES 9 WINCH - 6.5 INCH DRUM              |
|     | 711126            | 1   | SERIES 12 WINCH - 6.5 INCH DRUM             |
| 3   | 7189065           | 1   | AIR LINE TRANSFER BRACKET                   |
| 4   | A90065            | 1   | CABLE TENSIONER PLATE                       |
| 5   | A9018S            | 2   | TENSION SPRING 40 LB/INCH                   |
| 6   | 0400733           | 14  | BOLT M12-1.75 MM x 35 HHC 8.8               |
| 7   | 0403040           | 20  | FLAT WASHER 1/2 SAE                         |
| 8   | 0400181           | 14  | BOLT 1/2-13 UNC x 1-1/2 HHC GR5             |
| 9   | 0403100           | 14  | NUT NYLOCK 1/2-13 UNC                       |
| 10  | 69125             | 2   | 6 x 1 PULLEY                                |
| 11  | 315225            | 1   | CABLE GUIDE                                 |
| 12  | 0400878           | 4   | BOLT 3/8-16 UNJC x 3/4 BHC                  |
| 13  | 0400482           | 5   | LOCK WASHER 3/8                             |
| 14  | 315230            | 1   | PULLEY PIN                                  |
| 15  | 315310            | 1   | SLIDE CARRIAGE                              |
| 16  | 315330            | 1   | PULLEY PIN                                  |
| 17  | 0403161           | 1   | BOLT 3/8 -16 UNC x 5/8 BHC                  |
| 18  | 315325            | 1   | CABLE GUIDE                                 |
| 19  | 0403158           | 2   | BOLT 5/16 -18 UNC x 5/8 BHC                 |
| 20  | 0400464           | 2   | LOCK WASHER 5/16                            |
| 21  | 315320            | 1   | SLIDE PAD                                   |
| 22  | 315323            | 2   | FRONT SLIDE PAD                             |
| 23  | 04000321          | 12  | SCREW 5/16-18 UNC x 1-1/4 FH TORX           |
| 24  | 0400382           | 12  | NUT NYLOCK 5/16-18 UNC                      |
| 25  | ADPTR202702-10X08 | 2   | ADAPTER 10MORB x 8JICM                      |
| 26  | 383SW0944         | 1   | ST SLIDEWINDER FLUID TUBE-LONG              |
| 27  | 383SW0940         | 1   | ST SLIDEWINDER FLUID TUBE-SHORT             |
| 28  | 07005356          | 1   | G2 SHORT TRACK SLIDEWINDER FLUID TUBE-LONG  |
| 29  | 07005355          | 1   | G2 SHORT TRACK SLIDEWINDER FLUID TUBE-SHORT |

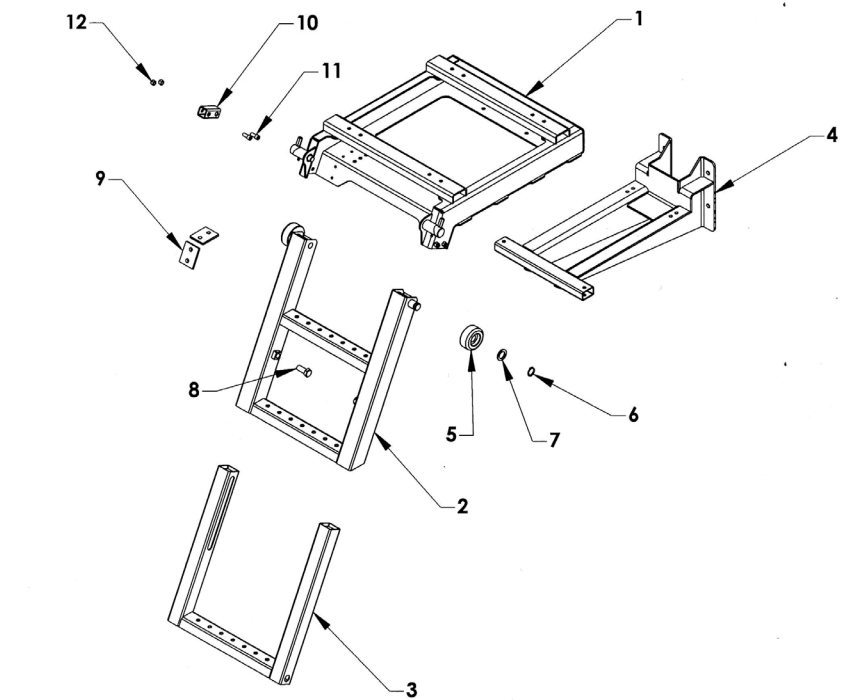
## Section V - PARTS

### MANUAL SLIDEWINDER (LONG TRACK)



| REF | PART #            | QTY | DESCRIPTION                         |
|-----|-------------------|-----|-------------------------------------|
| 1   | 315214            | 1   | SLIDE TRACK - LONG                  |
| 2   | 711096            | 1   | SERIES 9 WINCH - 6.5 INCH DRUM      |
|     | 711126            | 1   | SERIES 12 WINCH - 6.5 INCH DRUM     |
| 3   | 7189065           | 1   | AIR LINE TRANSFER BRACKET           |
| 4   | A90065            | 1   | CABLE TENSIONER PLATE               |
| 5   | A9018S            | 2   | TENSION SPRING 40 LB/INCH           |
| 6   | 0400733           | 14  | BOLT M12-1.75 MM x 35 HHC 8.8       |
| 7   | 0403040           | 22  | FLAT WASHER 1/2 SAE                 |
| 8   | 0400181           | 16  | BOLT 1/2-13 UNC x 1-1/2 HHC GR5     |
| 9   | 0403100           | 16  | NUT NYLOCK 1/2-13 UNC               |
| 10  | 69125             | 2   | 6 x 1 PULLEY                        |
| 11  | 315225            | 1   | CABLE GUIDE                         |
| 12  | 0400878           | 4   | BOLT 3/8-16 UNJC x 3/4 BHC          |
| 13  | 0400482           | 5   | LOCK WASHER 3/8                     |
| 14  | 315230            | 1   | PULLEY PIN                          |
| 15  | 315310            | 1   | SLIDE CARRIAGE                      |
| 16  | 315330            | 1   | PULLEY PIN                          |
| 17  | 0403161           | 1   | BOLT 3/8 -16 UNC x 5/8 BHC          |
| 18  | 315325            | 1   | CABLE GUIDE                         |
| 19  | 0403158           | 2   | BOLT 5/16 -18 UNC x 5/8 BHC         |
| 20  | 0400464           | 2   | LOCK WASHER 5/16                    |
| 21  | 315320            | 1   | SLIDE PAD                           |
| 22  | 315323            | 2   | FRONT SLIDE PAD                     |
| 23  | 04000321          | 12  | SCREW 5/16-18 UNC x 1-1/4 FH TORX   |
| 24  | 0400382           | 12  | NUT NYLOCK 5/16-18 UNC              |
| 25  | ADPTR202702-10X08 | 2   | ADAPTER 10MORB x 8JICM              |
| 26  | 0751932           | 1   | G2 LONG TRACK LCG FLUID TUBE-LONG   |
| 27  | 0751933           | 1   | G2 LONG TRACK LCG FLUID TUBE--SHORT |
| 28  | 0752598           | 1   | G2 LONG TRACK CNV FLUID TUBE-LONG   |
| 29  | 0752599           | 1   | G2 LONG TRACK CNV FLUID TUBE-SHORT  |

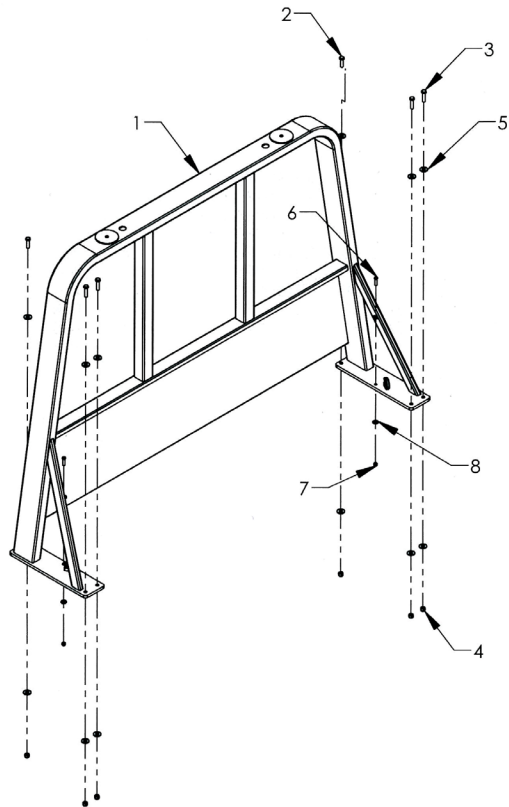
# Section V - PARTS RETRACTABLE LADDER



| REF | PART #  | QTY | DESCRIPTION                       |
|-----|---------|-----|-----------------------------------|
|     | 391000  | 1   | LADDER ASSEMBLY                   |
| 1   | 391010  | 1   | LADDER CARRIAGE                   |
| 2   | 391020  | 1   | UPPER RUNG ASSEMBLY               |
| 3   | 391030  | 1   | LOWER RUNG ASSEMBLY               |
| 4   | 391050  | 1   | FRAME MOUNTING BRACKET - OPTIONAL |
| 5   | 36310   | 2   | WHEEL                             |
| 6   | 86100E  | 2   | RETAINING RING 1.00 EXTERNAL      |
| 7   | 0400470 | 2   | FLAT WASHER 1 x 1.50              |
| 8   | 0403063 | 2   | RETAINING BOLT 5/8-11 x 1-1/2     |
| 9   | 391018  | 4   | WEAR PAD                          |
| 10  | 391015  | 2   | RETAINING TUBE                    |
| 11  | 0403109 | 4   | ALLEN HEAD BOLT 3/8-16 x 1        |
| 12  | 0400392 | 4   | NYLON LOCK NUT 3/8-16             |

## Section V - PARTS

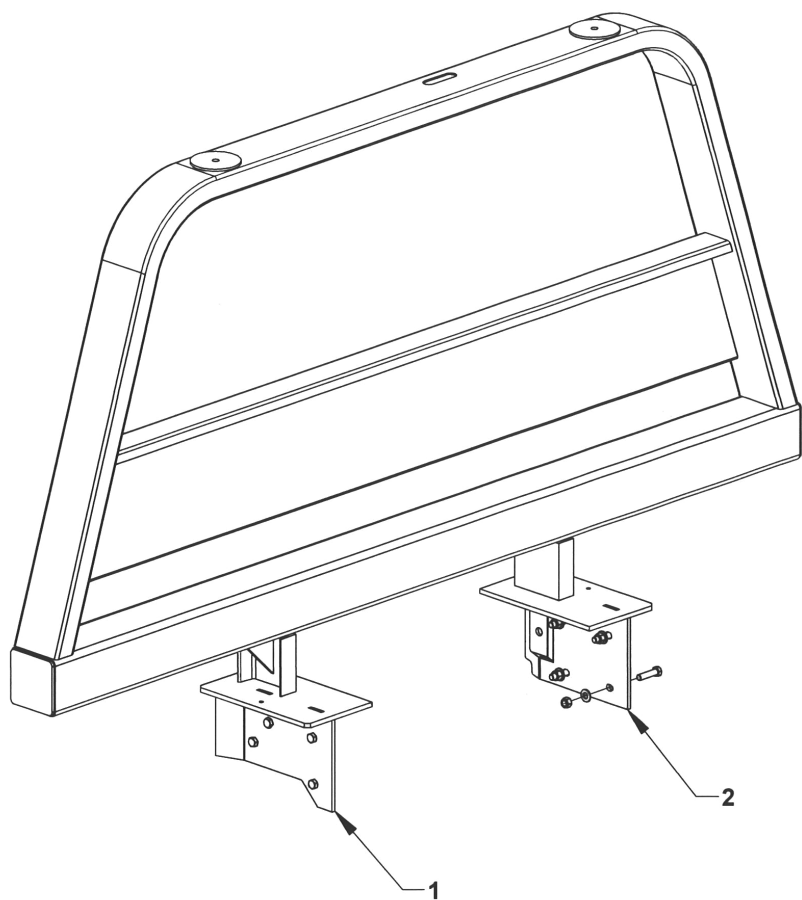
### BED MOUNTED CAB PROTECTOR



| REF | PART #                                                                                                                                   | QTY | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----|------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 0809558-38<br>0809558-42<br>0809558-45<br>0809558-48<br>0809558-50<br>0809558-52<br>0809558-54<br>0809558-57<br>0809558-60<br>0809558-64 | 1   | 2 x 5 PERIMETER TUBE CAB PROTECTOR - 38"<br>2 x 5 PERIMETER TUBE CAB PROTECTOR - 42"<br>2 x 5 PERIMETER TUBE CAB PROTECTOR - 45"<br>2 x 5 PERIMETER TUBE CAB PROTECTOR - 48"<br>2 x 5 PERIMETER TUBE CAB PROTECTOR - 50"<br>2 x 5 PERIMETER TUBE CAB PROTECTOR - 52"<br>2 x 5 PERIMETER TUBE CAB PROTECTOR - 54"<br>2 x 5 PERIMETER TUBE CAB PROTECTOR - 57"<br>2 x 5 PERIMETER TUBE CAB PROTECTOR - 60"<br>2 x 5 PERIMETER TUBE CAB PROTECTOR - 64" |
| 2   | 0400211                                                                                                                                  | 2   | 1/2 -13 x 1-3/4 HHCS GR 5 Z                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3   | 0400188                                                                                                                                  | 4   | 1/2 -13 x 2 HHCS                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 4   | 0400408                                                                                                                                  | 6   | 1/2 -13 NYLON LOCK NUT ZINC                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 5   | 0400492                                                                                                                                  | 12  | 1/2 USS FLAT WASHER ZINC                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 6   | 0400132                                                                                                                                  | 2   | 3/8 -16 x 1-1/2 HHCS GR 5 Z                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 7   | 0400392                                                                                                                                  | 2   | 3/8 -16 NYLON LOCK NUT ZINC                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 8   | 0400480                                                                                                                                  | 4   | 3/8 - USS FLAT WASHER ZINC                                                                                                                                                                                                                                                                                                                                                                                                                           |

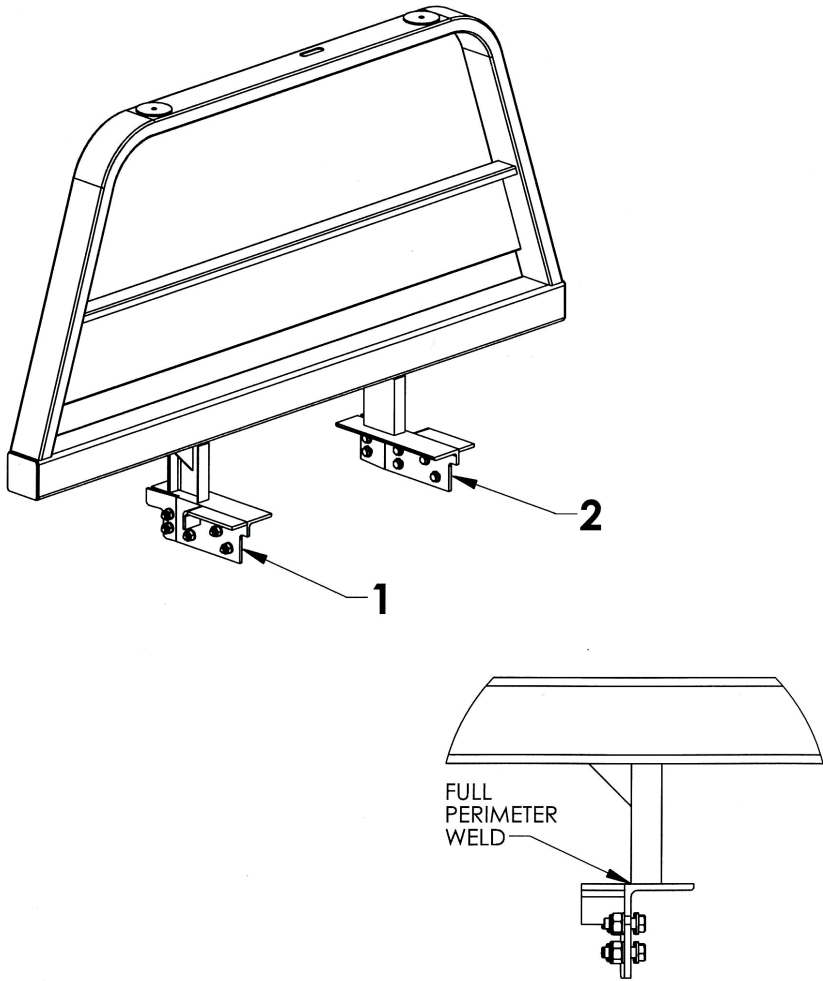


**Section V-PARTS**  
**FORD F550/F600 FRAME MOUNTED**  
**PYLON BRACKETS**



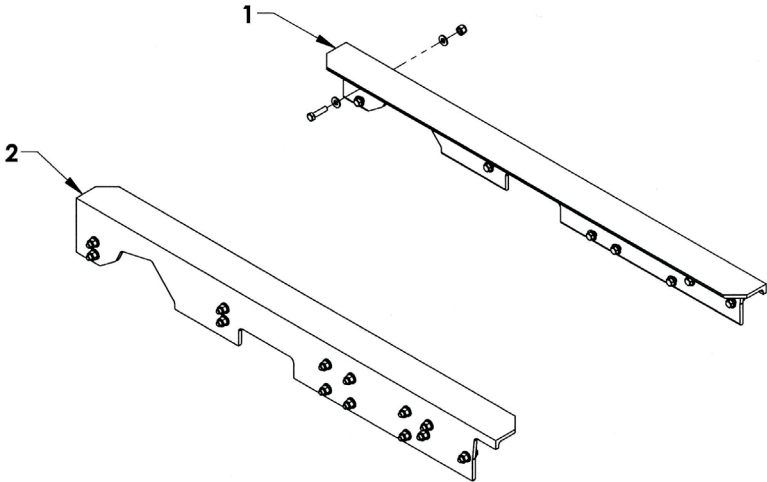
| REF | PART #    | QTY | DESCRIPTION                     |
|-----|-----------|-----|---------------------------------|
| 1   | 08003094L | 1   | FORD F550 FMP MOUNT - LH        |
|     | 08015992L | 1   | FORD F600 FMP MOUNT - LH        |
| 2   | 08003094R | 1   | FORD F550 FMP MOUNT - RH        |
|     | 08015992R | 1   | FORD F600 FMP MOUNT - RH        |
| -   | 09003769  | 1   | BOLT KIT, F550 PRE-INSTALLATION |

**Section V-PARTS**  
**2013 DODGE 5500 FRAME MOUNTED**  
**PYLON BRACKETS**



| REF | PART #   | QTY | DESCRIPTION                             |
|-----|----------|-----|-----------------------------------------|
| 1   | 0811135L | 1   | DODGE FMP/BED LOCK MOUNTING ANGLE - LH  |
| 2   | 0811135R | 1   | DODGE FMP/BED LOCK MOUNTING ANGLE - RH  |
| -   | 0940177  | 1   | BOLT KIT, 2013 DODGE FMP MOUNTING ANGLE |

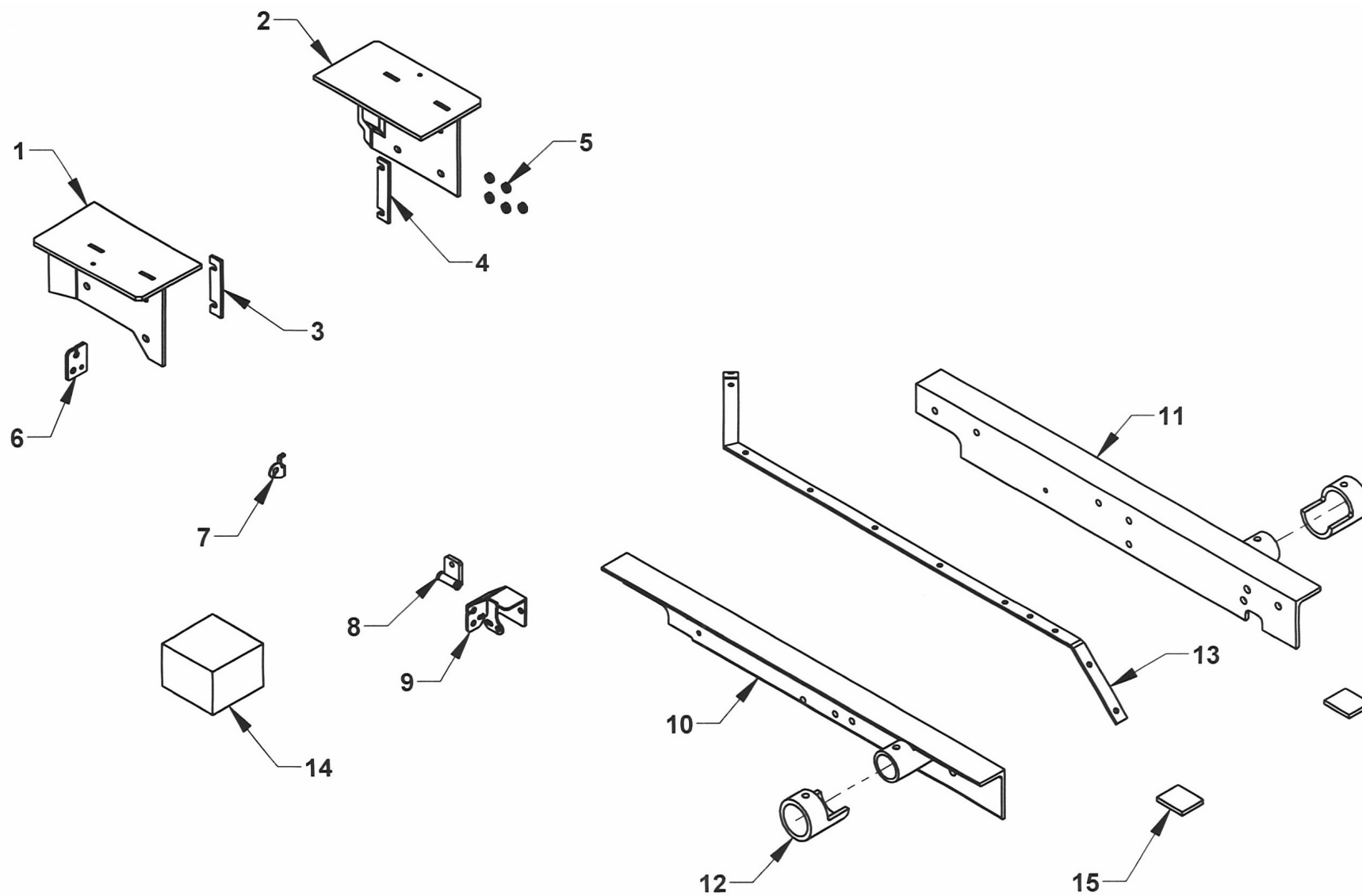
**Section V - PARTS**  
**2015 DODGE FRAME REINFORCEMENTS**



| REF | PART #   | QTY | DESCRIPTION                           |
|-----|----------|-----|---------------------------------------|
| 1   | 0751990L | 1   | 2015 DODGE FRAME REINFORCEMENT - LH   |
| 2   | 0751990R | 1   | 2015 DODGE FRAME REINFORCEMENT - RH   |
| -   | 0940178  | 1   | BOLT KIT, 2011 DODGE FRAME REINFORCE- |

## Section V - PARTS

### 2017 FORD F550 FRAME REINFORCEMENTS PRE-INSTALLATION KIT - 09003731



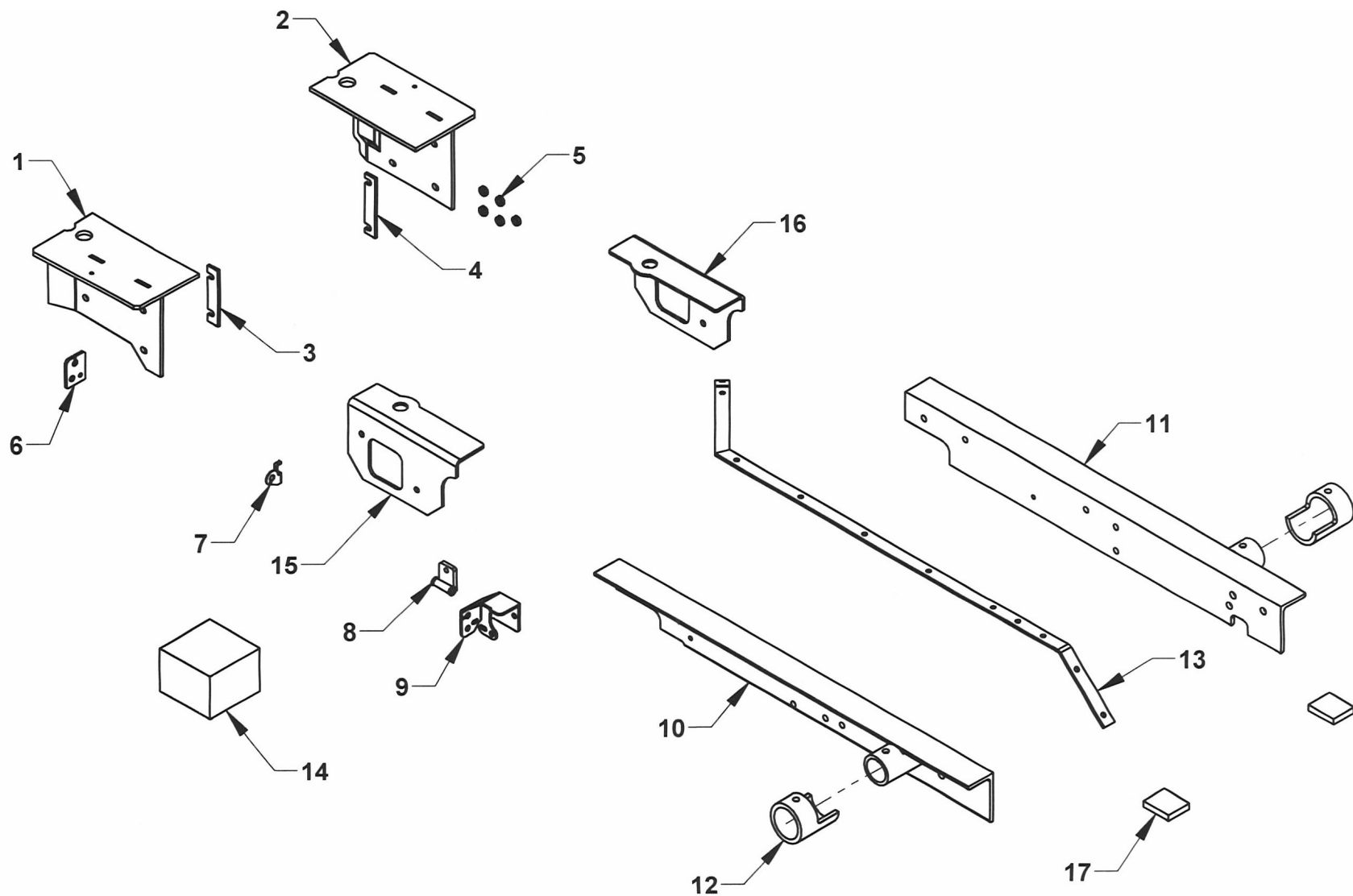
## Section V - PARTS

### 2017 FORD F550 FRAME REINFORCEMENTS PRE-INSTALLATION KIT - 09003731

| REF | PART #    | QTY | DESCRIPTION                                  |
|-----|-----------|-----|----------------------------------------------|
| 1   | 08003094L | 1   | 2017 F550 FMP BED LOCK MOUNT - LH            |
| 2   | 08003094R | 1   | 2017 F550 FMP BED LOCK MOUNT - RH            |
| 3   | 07024925  | 1   | 2017 F550 INSIDE FRAME SLOTTED PLATE - LH    |
| 4   | 07005230  | 1   | 2017 F550 INSIDE FRAME SLOTTED PLATE - RH    |
| 5   | 07005130  | 5   | DEF TANK SPACER WASHER - F550                |
| 6   | 07005357  | 1   | 2017 F550 FRONT E-BRAKE CABLE BRACKET        |
| 7   | 07005129  | 1   | 2017 F550 E-BRAKE CABLE BRACKET              |
| 8   | 0811153   | 1   | EMERGENCY BRAKE CABLE GUIDE                  |
| 9   | 08003249  | 1   | 2017 F550 REAR E-BRAKE CABLE BRACKET         |
| 10  | 08003287L | 1   | 2017 F550 FRAME REINFORCEMENT ANGLE - LH     |
| 11  | 08003287R | 1   | 2017 F550 FRAME REINFORCEMENT ANGLE - RH     |
| 12  | 0720391N  | 2   | HELPER SPRING BUSHING - OUTER                |
| 13  | 08003307  | 1   | 2017 F550 PRESSURE HOSE SUPPORT BAR          |
| 14  | 09003769  | 1   | BOLT KIT 2017 FORD FRAME REINFORCEMENT       |
| 15  | 0752556   | 2   | FORD F550 HINGE ANGLE SPACER 3 x 2-1/2 x 3/8 |

## Section V - PARTS

### 2021 FORD F600 FRAME REINFORCEMENTS PRE-INSTALLATION KIT - 09018451



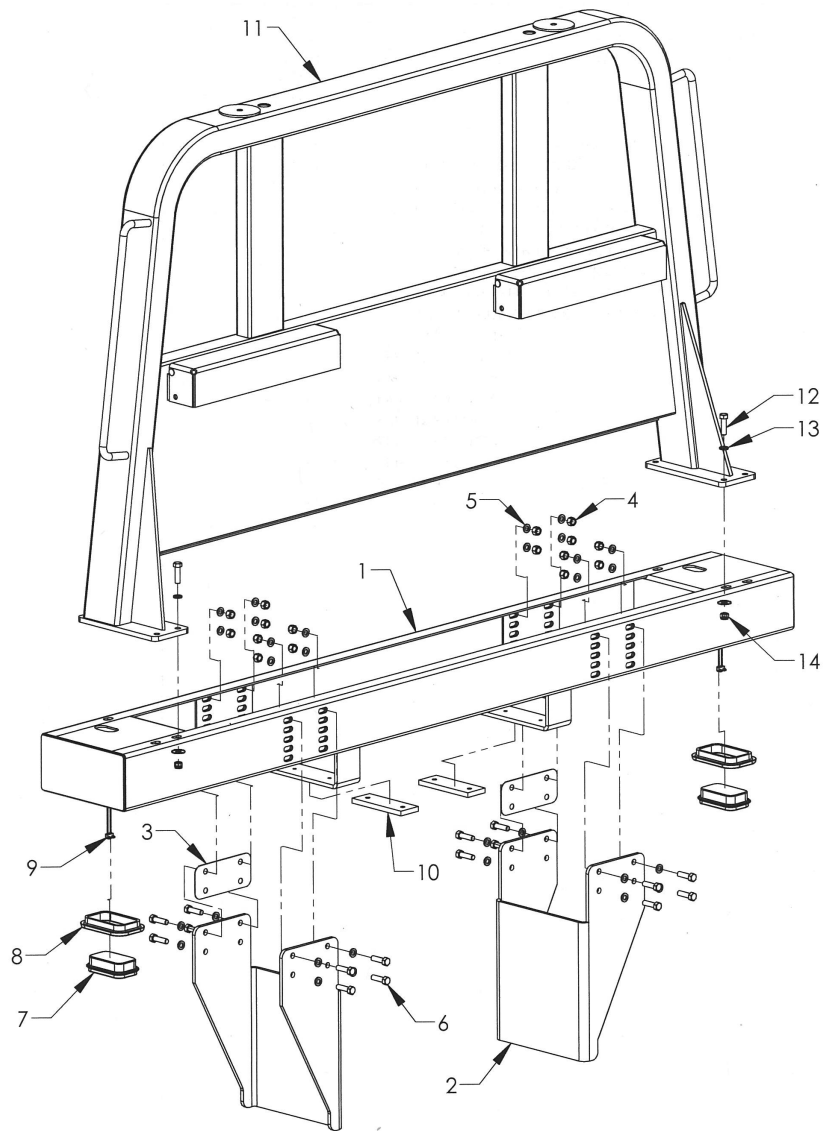
## Section V - PARTS

### 2021 FORD F600 FRAME REINFORCEMENTS PRE-INSTALLATION KIT - 09018451

| REF | PART #    | QTY | DESCRIPTION                                  |
|-----|-----------|-----|----------------------------------------------|
| 1   | 08015992L | 1   | 2021 F600 FMP BED LOCK MOUNT - LEFT          |
| 2   | 08015992R | 1   | 2021 F600 FMP BED LOCK MOUNT - RIGHT         |
| 3   | 07024925  | 1   | 2017 F550 INSIDE FRAME SLOTTED PLATE - LEFT  |
| 4   | 07005230  | 1   | 2017 F550 INSIDE FRAME SLOTTED PLATE - RIGHT |
| 5   | 07005130  | 5   | DEF TANK SPACER WASHER - F550                |
| 6   | 07005357  | 1   | 2017 F550 FRONT E-BRAKE CABLE BRACKET        |
| 7   | 07005129  | 1   | 2017 F550 E-BRAKE CABLE BRACKET              |
| 8   | 0811153   | 1   | EMERGENCY BRAKE CABLE GUIDE                  |
| 9   | 08003249  | 1   | 2017 F550 REAR E-BRAKE CABLE BRACKET         |
| 10  | 08003287L | 1   | 2017 F550 FRAME REINFORCEMENT ANGLE - LEFT   |
| 11  | 08003287R | 1   | 2017 F550 FRAME REINFORCEMENT ANGLE - RIGHT  |
| 12  | 0720391N  | 2   | HELPER SPRING BUSHING - OUTER                |
| 13  | 08003307  | 1   | 2017 F550 PRESSURE HOSE SUPPORT BAR          |
| 14  | 09003769  | 1   | BOLT KIT 2017 FORD FRAME REINFORCEMENT       |
| 15  | 07024842L | 1   | 2021 F600 TRUNNION SHIM - LEFT               |
| 16  | 07024842R | 1   | 2021 F600 TRUNNION SHIM - RIGHT              |
| 17  | 07024844  | 2   | FORD F600 HINGE ANGLE SPACER 3 x 2 x 5/8     |

**Section V-PARTS**

**FRAME MOUNTED PYLON - 0940456-096**  
**CONVENTIONAL BASE ASSEMBLY**



GRAB HANDLES AND CHAIN HANGERS ARE OPTIONAL PYLON EQUIPMENT

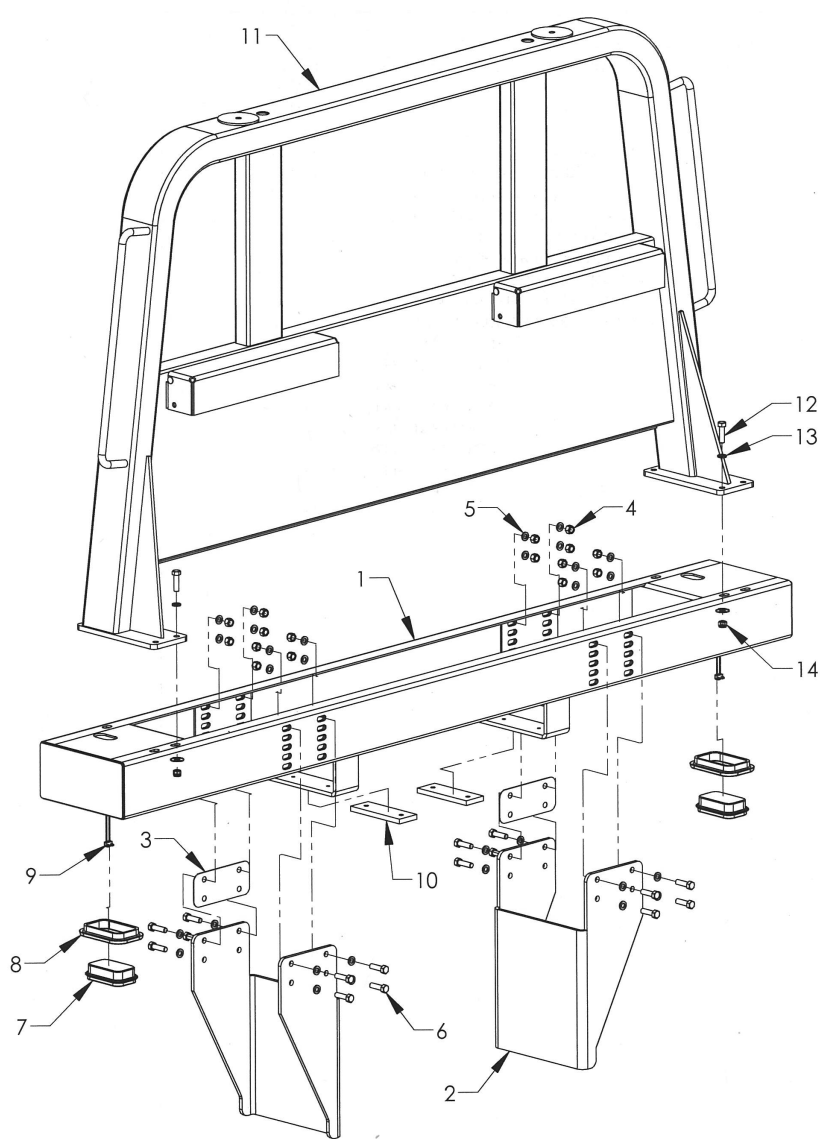
## Section V - PARTS

### FRAME MOUNTED PYLON - 0940456-096

| REF | PART #         | QTY | DESCRIPTION                              |
|-----|----------------|-----|------------------------------------------|
| 1   | 0811196-096    | 1   | FMP CONVENTIONAL CHAIN TRAY BASE - 096   |
| 2   | 0752750        | 2   | PYLON MTG BRACKET, FMP CONV              |
| 3   | 0752730        | 2   | SHIM, 16 GAGE, FMP BASE                  |
| 4   | 0400408        | 16  | NYLON LOCK NUT 1/2-13 UNC                |
| 5   | 0403040        | 32  | FLAT WASHER 1/2 SAE ZP                   |
| 6   | 0403058        | 16  | BOLT HHCS 1/2-13 x 1-3/4 GR8 PLAIN       |
| 7   | 0311511        | 2   | CARRIER TAIL LIGHT GROMMET - OPTIONAL    |
| 8   | 0311509        | 2   | LIGHT RECT REVERSE LED - OPTIONAL        |
| 9   | 0311506        | 2   | LIGHT PIGTAIL 2 PRONG 18 IN. LEAD        |
| 10  | 354614-050     | 2   | FMP 1/2 IN. SPACER SERIES 16 CONV        |
|     | 354614-100     |     | FMP 1 IN. SPACER SERIES 20 CONV          |
|     | 354614-200     |     | FMP 2 IN. SPACER SERIES 20 CONV WOOD     |
|     | 354614-175     |     | FMP 1-3/4 IN. SPACER SERIES 30 CONV      |
|     | 354614-100/175 |     | FMP 2-3/4 IN. SPACER SERIES 30 CONV WOOD |
| 11  | 0811185-48     | 1   | FMP 12 PYLON-48                          |
|     | 0811185-50     |     | FMP 12 PYLON-50                          |
|     | 0811185-52     |     | FMP 12 PYLON-52                          |
|     | 0811185-56     |     | FMP 12 PYLON-56                          |
|     | 0811185-60     |     | FMP 12 PYLON-60                          |
|     | 0811185-63     |     | FMP 12 PYLON-63                          |
|     | 0811185-68     |     | FMP 12 PYLON-68                          |
| 12  | 0403058        | 6   | BOLT HHCS 1/2-13 x 1-3/4 GR8 PLAIN       |
| 13  | 0403040        | 12  | FLAT WASHER 1/2 SAE ZP                   |
| 14  | 0400408        | 6   | NYLON LOCK NUT 1/2-13 UNC                |



**Section V-PARTS**  
**FRAME MOUNTED PYLON - 0940456-102**  
**CONVENTIONAL BASE ASSEMBLY**



GRAB HANDLES AND CHAIN HANGERS ARE OPTIONAL PYLON EQUIPMENT

## Section V - PARTS

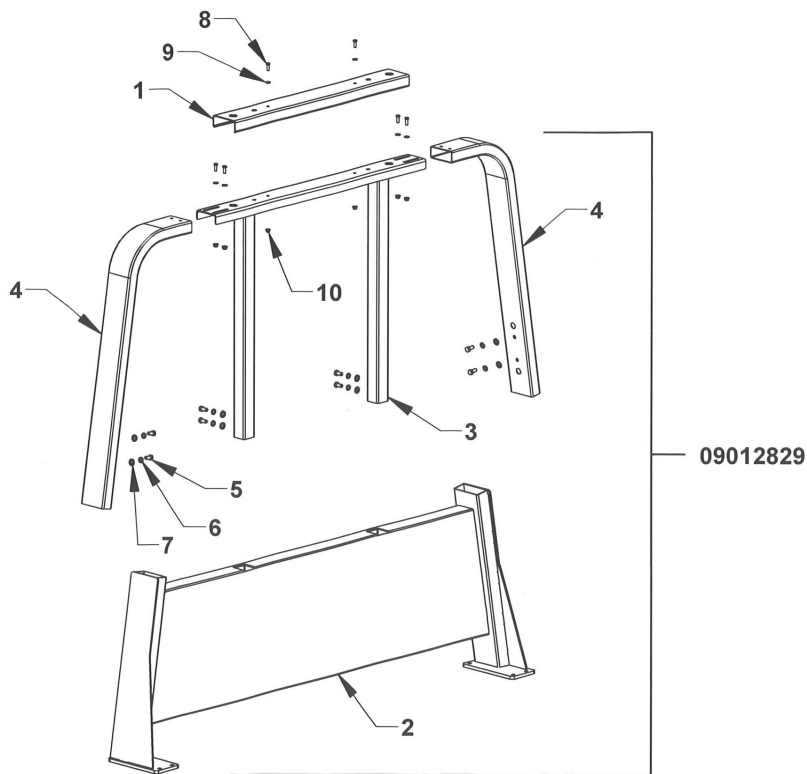
### FRAME MOUNTED PYLON - 0940456-102

| REF | PART #         | QTY | DESCRIPTION                              |
|-----|----------------|-----|------------------------------------------|
| 1   | 0811196-102    | 1   | FMP CONVENTIONAL CHAIN TRAY BASE - 102   |
| 2   | 0752750        | 2   | PYLON MTG BRACKET, FMP CONV              |
| 3   | 0752730        | 2   | SHIM, 16 GAGE, FMP BASE                  |
| 4   | 0400408        | 16  | NYLON LOCK NUT 1/2-13 UNC                |
| 5   | 0403040        | 32  | FLAT WASHER 1/2 SAE ZP                   |
| 6   | 0403058        | 16  | BOLT HHCS 1/2-13 x 1-3/4 GR8 PLAIN       |
| 7   | 0311511        | 2   | CARRIER TAIL LIGHT GROMMET - OPTIONAL    |
| 8   | 0311509        | 2   | LIGHT RECT REVERSE LED - OPTIONAL        |
| 9   | 0311506        | 2   | LIGHT PIGTAIL 2 PRONG 18 IN. LEAD        |
| 10  | 354614-050     | 2   | FMP 1/2 IN. SPACER SERIES 16 CONV        |
|     | 354614-100     |     | FMP 1 IN. SPACER SERIES 20 CONV          |
|     | 354614-200     |     | FMP 2 IN. SPACER SERIES 20 CONV WOOD     |
|     | 354614-175     |     | FMP 1-3/4 IN. SPACER SERIES 30 CONV      |
|     | 354614-100/175 |     | FMP 2-3/4 IN. SPACER SERIES 30 CONV WOOD |
| 11  | 0811185-48     | 1   | FMP 12 PYLON-48                          |
|     | 0811185-50     |     | FMP 12 PYLON-50                          |
|     | 0811185-52     |     | FMP 12 PYLON-52                          |
|     | 0811185-56     |     | FMP 12 PYLON-56                          |
|     | 0811185-60     |     | FMP 12 PYLON-60                          |
|     | 0811185-63     |     | FMP 12 PYLON-63                          |
|     | 0811185-68     |     | FMP 12 PYLON-68                          |
| 12  | 0403058        | 6   | BOLT HHCS 1/2-13 x 1-3/4 GR8 PLAIN       |
| 13  | 0403040        | 12  | FLAT WASHER 1/2 SAE ZP                   |
| 14  | 0400408        | 6   | NYLON LOCK NUT 1/2-13 UNC                |

Section V-PARTS

ADJUSTABLE CAB PROTECTOR 09012829-XX

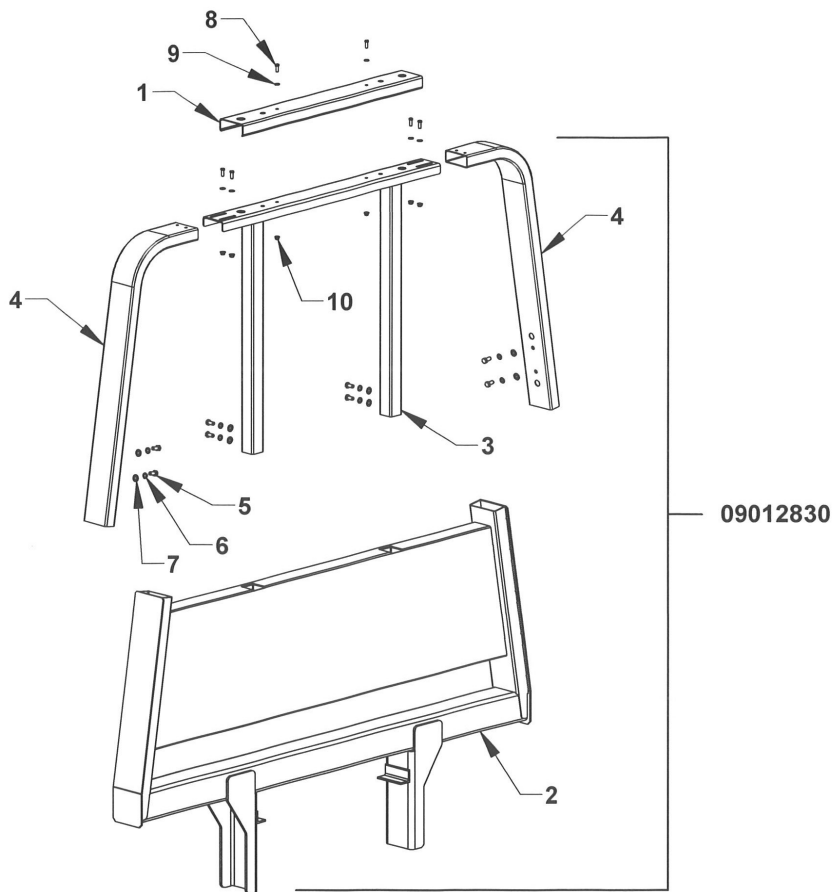
(FRAME MOUNTED 12-INCH BASE)



| REF | PART #      | QTY | DESCRIPTION                           |
|-----|-------------|-----|---------------------------------------|
| 1   | 07011335-46 | 1   | CAB PROTECTOR TRIM CHANNEL            |
| 2   | 08011110    | 1   | ADJUSTABLE CAB PROTECTOR BASE FMP 12" |
| 3   | 08007570    | 1   | CAB PROTECTOR CENTER SUPPORT          |
| 4   | 08007571    | 2   | ADJUSTABLE SIDE TUBE                  |
| 5   | 0400176     | 8   | BOLT HHCS 1/2-13 UNC x 1 GR5          |
| 6   | 0400491     | 8   | LOCK WASHER 1/2 ZP                    |
| 7   | 0403128     | 8   | FLAT WASHER 1/2 ZP                    |
| 8   | 0400126     | 6   | BOLT HHCS 3/8-16 UNC x 1 GR5          |
| 9   | 0400480     | 6   | FLAT WASHER 3/8 ZP                    |
| 10  | 04002907    | 6   | NUT, FLANGED NYLOK 3/8-16 UNC ZP      |

## Section V-PARTS

### ADJUSTABLE CAB PROTECTOR 09012830-XX (FRAME MOUNTED 5-INCH BASE)

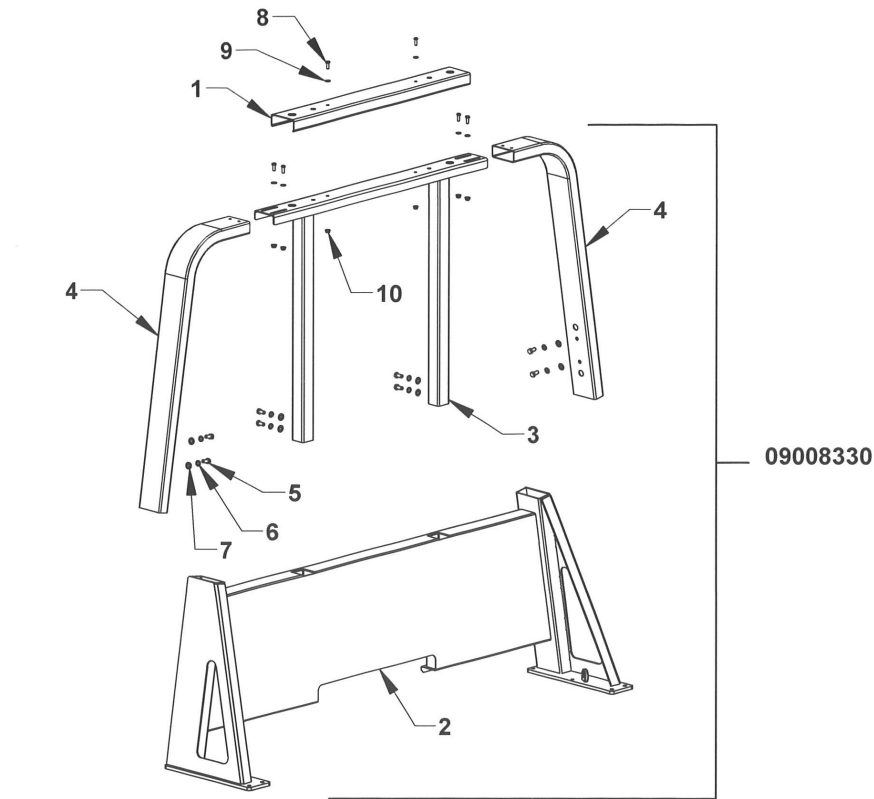


| REF | PART #      | QTY | DESCRIPTION                              |
|-----|-------------|-----|------------------------------------------|
| 1   | 07011335-46 | 1   | CAB PROTECTOR TRIM CHANNEL               |
| 2   | 08011112    | 1   | ADJUSTABLE CAB PROTECTOR BASE FMP 5" CNV |
| 3   | 08007570    | 1   | CAB PROTECTOR CENTER SUPPORT             |
| 4   | 08007571    | 2   | ADJUSTABLE SIDE TUBE                     |
| 5   | 0400176     | 8   | BOLT HHCS 1/2-13 UNC x 1 GR5             |
| 6   | 0400491     | 8   | LOCK WASHER 1/2 ZP                       |
| 7   | 0403128     | 8   | FLAT WASHER 1/2 ZP                       |
| 8   | 0400126     | 6   | BOLT HHCS 3/8-16 UNC x 1 GR5             |
| 9   | 0400480     | 6   | FLAT WASHER 3/8 ZP                       |
| 10  | 04002907    | 6   | NUT, FLANGED NYLOK 3/8-16 UNC ZP         |

Section V-PARTS

ADJUSTABLE CAB PROTECTOR 09008330-XX

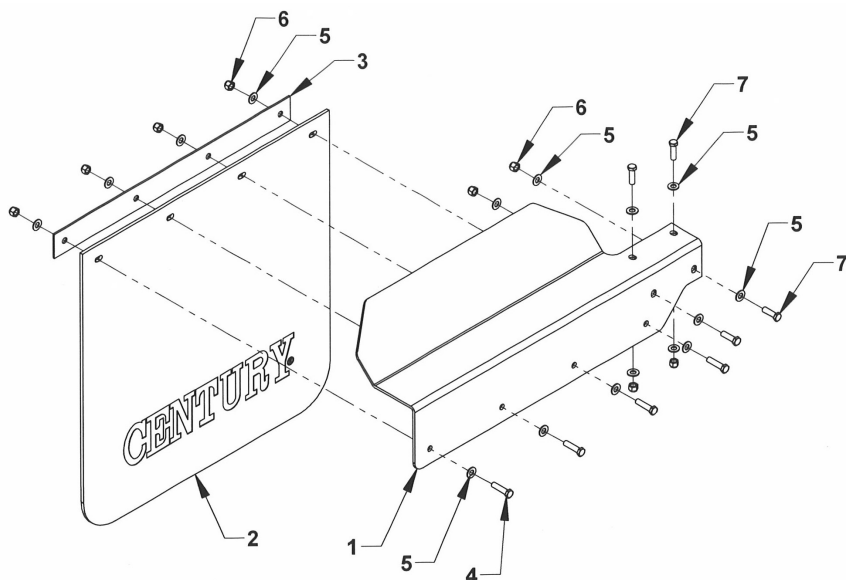
(BED MOUNTED)



| REF | PART #      | QTY | DESCRIPTION                      |
|-----|-------------|-----|----------------------------------|
| 1   | 07011335-46 | 1   | CAB PROTECTOR TRIM CHANNEL       |
| 2   | 08017569    | 1   | ADJUSTABLE CAB PROTECTOR BASE    |
| 3   | 08007570    | 1   | CAB PROTECTOR CENTER SUPPORT     |
| 4   | 08007571    | 2   | ADJUSTABLE SIDE TUBE             |
| 5   | 0400176     | 8   | BOLT HHCS 1/2-13 UNC x 1 GR5     |
| 6   | 0400491     | 8   | LOCK WASHER 1/2 ZP               |
| 7   | 0403128     | 8   | FLAT WASHER 1/2 ZP               |
| 8   | 0400126     | 6   | BOLT HHCS 3/8-16 UNC x 1 GR5     |
| 9   | 0400480     | 6   | FLAT WASHER 3/8 ZP               |
| 10  | 04002907    | 6   | NUT, FLANGED NYLOK 3/8-16 UNC ZP |

## Section V - PARTS

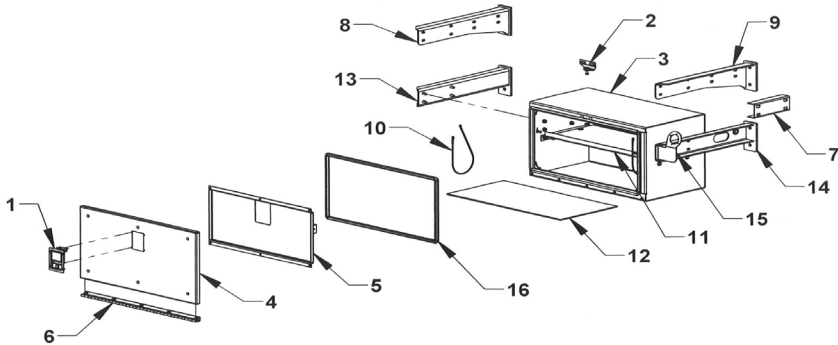
### MUDFLAP COMPONENTS



| REF | PART #   | QTY. | DESCRIPTION                      |
|-----|----------|------|----------------------------------|
| 1   | 0751024L | 1    | MUDFLAP MOUNTING BRACKET (LH)    |
|     | 0751024R | 1    | MUDFLAP MOUNTING BRACKET (RH)    |
| 2   | 0308419  | 1    | MUDFLAP 24 x 24                  |
| 3   | 0750340  | 1    | MUDFLAP SUPPORT BAR              |
| 4   | 0400132  | 4    | BOLT HHCS 3/8-16 UNC x 1-1/2 GR5 |
| 5   | 0400480  | 16   | WASHER 3/8                       |
| 6   | 0400392  | 8    | 3/8-16 NYLON LOCK NUT            |
| 7   | 0400122  | 4    | BOLT HHCS 3/8-16 UNC x 1-1/4 GR5 |

## Section V - PARTS

### 33" ALUMINUM SERIES 10 TOOLBOX - 377000 TOOLBOX/FUEL FILL MOUNTING BRACKETS

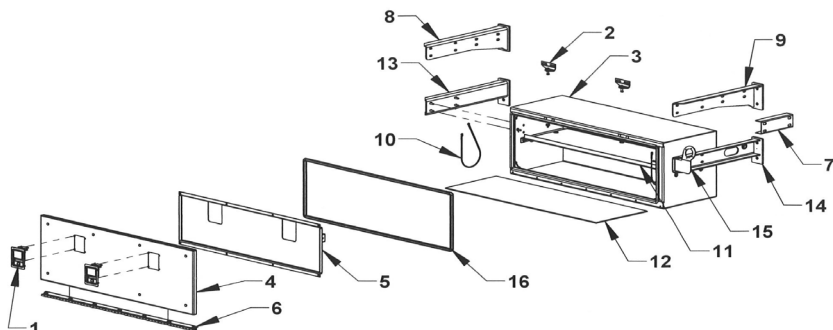


NOTE: 377000 DOES NOT INCLUDE MOUNTING BRACKETS

| REF | PART #   | QTY  | DESCRIPTION                             |
|-----|----------|------|-----------------------------------------|
| 1   | 54658    | 1    | ROTARY PADDLE LATCH                     |
|     | 54657    | 1    | GASKET FOR PADDLE LATCH                 |
|     | 81111    | 4    | #8-32 x 1/2 STAINLESS ONE WAY SCREW     |
|     | 83111    | 4    | #8-32 STAINLESS KEPT NUT                |
| 2   | 376182   | 1    | STRIKER PIN MOUNTING PLATE              |
|     | 54659    | 1    | STRIKER PIN                             |
|     | 81115    | 2    | STAINLESS CARRIAGE BOLT 5/16-18 x 3/4   |
|     | 82110    | 4    | FLAT WASHER 5/16                        |
|     | 82130    | 2    | LOCK WASHER 5/16                        |
|     | 83110    | 2    | NUT 5/16-18                             |
|     | 83125    | 1    | NYLON LOCK NUT 5/16-18                  |
| 3   | 377100W  | 1    | BOX WELDMENT                            |
| 4   | 37740    | 1    | DOOR ASSEMBLY                           |
|     | 37741    | 1    | DOOR WELDMENT                           |
|     | 81100    | 6    | STAINLESS CARRIAGE BOLT 1/4-20 x 3/4    |
|     | 0400367  | 6    | NYLON LOCK NUT 1/4-20                   |
| 5   | 37744    | 1    | DOOR REINFORCEMENT                      |
| 6   | 37735    | 1    | HINGE                                   |
|     | 811014   | 2    | SS SOCKET BUTTON HEAD BOLT 1/4-20 x 7/8 |
|     | 811012   | 3    | SS SOCKET BUTTON HEAD BOLT 1/4-20 x 3/4 |
|     | 811010   | 5    | SS SOCKET BUTTON HEAD BOLT 1/4-20 x 5/8 |
|     | 0400367  | 10   | NYLON LOCK NUT 1/4-20                   |
| 7   | 37760    | 1    | TANDEM BOX SPACER CHANNEL (OPTIONAL)    |
| 8   | 37855L   | 1    | TANK AND TOOLBOX MT BRACKET - LH        |
| 9   | 37855R   | 1    | TANK AND TOOLBOX MT BRACKET - RH        |
| 10  | 5A221    | 2    | LANYARD-21 INCH                         |
| 11  | 37770    | 1    | SHELF                                   |
| 12  | 03002300 | 1    | TOOLBOX MAT 33"                         |
| 13  | 0811136L | 1    | FORD/DODGE TOOLBOX MTG BRACKET - LH     |
| 14  | 0811136R | 1    | FORD/DODGE TOOLBOX MTG BRACKET - RH     |
| 15  | 0752566  | 1    | DODGE FUEL FILLER MTG PLATE             |
|     | 0752566F | 1    | FORD FUEL FILLER MTG PLATE              |
| 16  | 18151S   | 8 FT | TRIM SEAL - 3/16 WITH 5/8 BULB - 96 IN. |

## Section V - PARTS

### 49" ALUMINUM SERIES 10 TOOLBOX - 378000 TOOLBOX/FUEL FILL MOUNTING BRACKETS



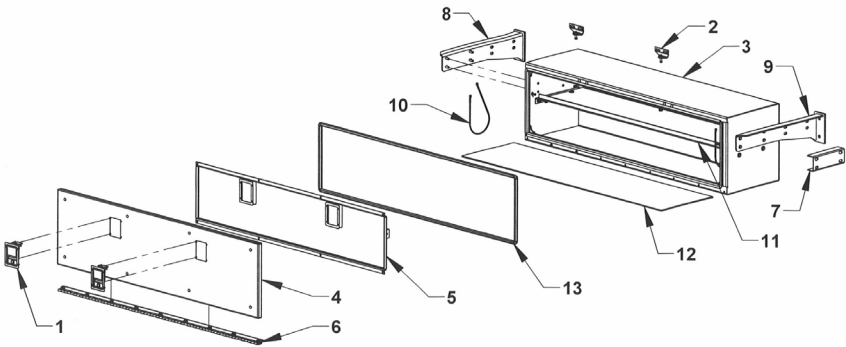
NOTE: 378000 DOES NOT INCLUDE MOUNTING BRACKETS

| REF | PART#    | QTY   | DESCRIPTION                              |
|-----|----------|-------|------------------------------------------|
| 1   | 54658    | 1     | ROTARY PADDLE LATCH                      |
|     | 54657    | 1     | GASKET FOR PADDLE LATCH                  |
|     | 81111    | 4     | #8-32 x 1/2 STAINLESS ONE WAY SCREW      |
|     | 83111    | 4     | #8-32 STAINLESS KEPT NUT                 |
| 2   | 376182   | 1     | STRIKER PIN MOUNTING PLATE               |
|     | 54659    | 1     | STRIKER PIN                              |
|     | 81115    | 2     | STAINLESS CARRIAGE BOLT 5/16-18 x 3/4    |
|     | 82110    | 4     | FLAT WASHER 5/16                         |
|     | 82130    | 2     | LOCK WASHER 5/16                         |
|     | 83110    | 2     | NUT 5/16-18                              |
|     | 83125    | 1     | NYLON LOCK NUT 5/16-18                   |
| 3   | 377100W  | 1     | BOX WELDMENT                             |
| 4   | 37740    | 1     | DOOR ASSEMBLY                            |
|     | 37741    | 1     | DOOR WELDMENT                            |
|     | 81100    | 6     | STAINLESS CARRIAGE BOLT 1/4-20 x 3/4     |
|     | 0400367  | 6     | NYLON LOCK NUT 1/4-20                    |
| 5   | 37744    | 1     | DOOR REINFORCEMENT                       |
| 6   | 37735    | 1     | HINGE                                    |
|     | 811014   | 2     | SS SOCKET BUTTON HEAD BOLT 1/4-20 x 7/8  |
|     | 811012   | 3     | SS SOCKET BUTTON HEAD BOLT 1/4-20 x 3/4  |
|     | 811010   | 5     | SS SOCKET BUTTON HEAD BOLT 1/4-20 x 5/8  |
|     | 0400367  | 10    | NYLON LOCK NUT 1/4-20                    |
| 7   | 37760    | 1     | TANDEM BOX SPACER CHANNEL (OPTIONAL)     |
| 8   | 37855L   | 1     | TANK AND TOOLBOX MT BRACKET - LH         |
| 9   | 37855R   | 1     | TANK AND TOOLBOX MT BRACKET - RH         |
| 10  | 5A221    | 2     | LANYARD-21 INCH                          |
| 11  | 37670    | 1     | SHELF                                    |
| 12  | 03002300 | 1     | TOOLBOX MAT 49"                          |
| 13  | 0811136L | 1     | FORD/DODGE TOOLBOX MTG BRACKET - LH      |
| 14  | 0811136R | 1     | FORD/DODGE TOOLBOX MTG BRACKET - RH      |
| 15  | 0752566  | 1     | DODGE FUEL FILLER MTG PLATE              |
|     | 0752566F | 1     | FORD FUEL FILLER MTG PLATE               |
| 16  | 18151S   | 11 FT | TRIM SEAL - 3/16 WITH 5/8 BULB - 132 IN. |



Section V - PARTS

65" ALUMINUM TOOLBOX - 379000

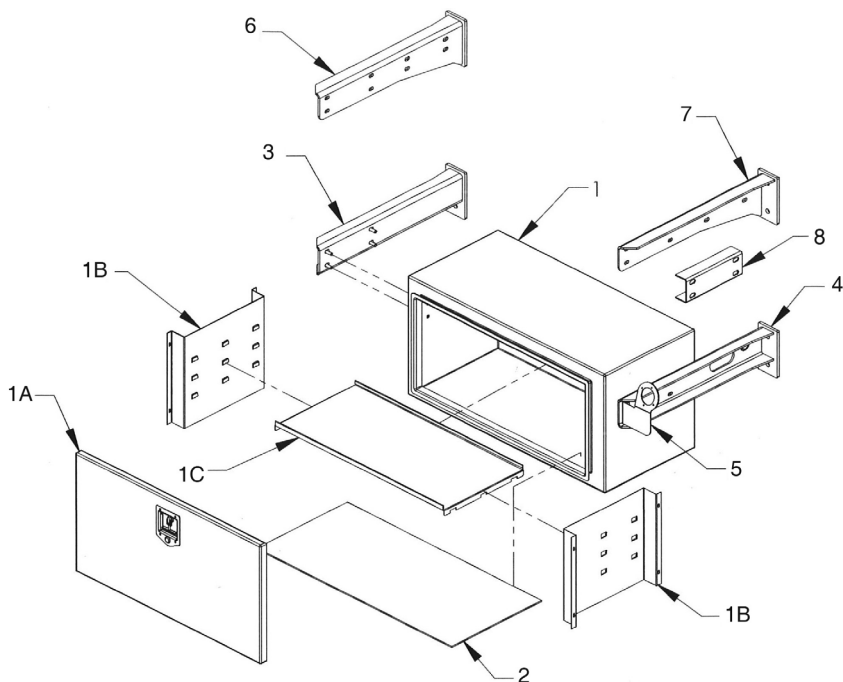


NOTE: 379000 DOES NOT INCLUDE MOUNTING BRACKETS

| REF | PART #    | QTY     | DESCRIPTION                             |
|-----|-----------|---------|-----------------------------------------|
| 1   | 54658     | 2       | ROTARY PADDLE LATCH                     |
|     | 54657     | 2       | GASKET FOR PADDLE LATCH                 |
|     | 81111     | 8       | #8-32 x 1/2 STAINLESS ONE WAY SCREW     |
|     | 83111     | 8       | #8-32 STAINLESS KEPT NUT                |
|     | 376182    | 2       | STRIKER PIN MOUNTING PLATE              |
| 2   | 54659     | 2       | STRIKER PIN                             |
|     | 0403072   | 4       | STAINLESS CARRIAGE BOLT 5/16-18 x 3/4   |
|     | 0400465   | 8       | FLAT WASHER 5/16                        |
|     | 0400464   | 4       | LOCK WASHER 5/16                        |
|     | 0403151   | 4       | NUT 5/16-18                             |
| 3   | 0400382   | 2       | NYLON LOCK NUT 5/16-18                  |
|     | 379100W   | 1       | BOX WELDMENT                            |
|     | 37941     | 1       | DOOR WELDMENT                           |
|     | 37940     | 1       | DOOR ASSEMBLY                           |
|     | 81100     | 8       | STAINLESS CARRIAGE BOLT 1/4-20 x 3/4    |
| 4   | 0400367   | 8       | NYLON LOCK NUT 1/4-20                   |
|     | 37944     | 1       | DOOR REINFORCEMENT                      |
|     | 37935     | 1       | HINGE                                   |
|     | 811014    | 2       | SS SOCKET BUTTON HEAD BOLT 1/4-20 x 7/8 |
|     | 811012    | 7       | SS SOCKET BUTTON HEAD BOLT 1/4-20 x 3/4 |
| 5   | 811010    | 7       | SS SOCKET BUTTON HEAD BOLT 1/4-20 x 5/8 |
|     | 0400367   | 18      | NYLON LOCK NUT 1/4-20                   |
|     | 37760     | 1       | TANDEM BOX SPACER CHANNEL (OPTIONAL)    |
|     | 37855R    | 1       | TANK AND TOOLBOX MTG BRACKET-RH         |
|     | 37855L    | 1       | TANK AND TOOLBOX MTG BRACKET-LH         |
| 10  | 5A221     | 2       | LANYARD-21 INCH                         |
| 11  | 37970     | 1       | SHELF                                   |
| 12  | 030002302 | 1       | TOOLBOX MAT 65"                         |
| 13  | 18151S    | 13.5 FT | TRIM SEAL - 3/8 WITH 5/8 BULB - 162 IN. |

## Section V - PARTS

### 36" STEEL TOOLBOX SERIES 10 FUEL FILL MOUNTING BRACKETS



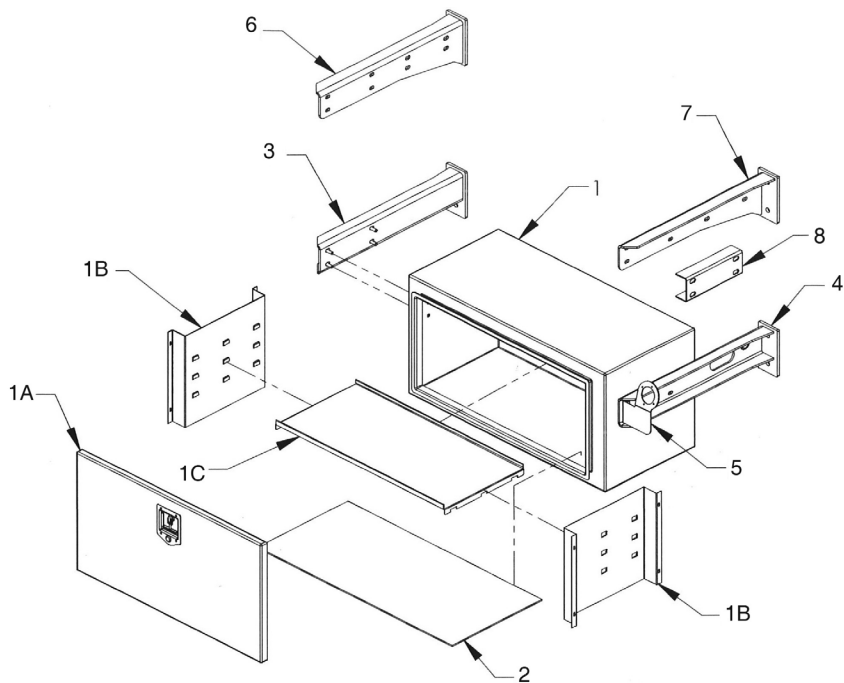
NOTE: 174016021 DOES NOT INCLUDE MOUNTING BRACKETS

| REF | PART #      | QTY | DESCRIPTION                           |
|-----|-------------|-----|---------------------------------------|
| 1   | 174016021   | 1   | STEEL TOOLBOX 36"                     |
| 1A  | 174016021D  | 1   | DOOR ASSEMBLY                         |
| 1B  | 07002918    | 2   | STEEL TOOLBOX INSIDE PANEL            |
| 1C  | 07002919-36 | 1   | STEEL TOOLBOX 36" SHELF               |
| 2   | 0308801     | 1   | TOOLBOX MAT 36"                       |
| 3   | 0811136L    | 1   | FORD/DODGE TOOLBOX MTG BRACKET - LH   |
| 4   | 0811136R    | 1   | FORD/DODGE TOOLBOX MTG BRACKET - RH   |
| 5   | 0752566     | 1   | DODGE FUEL FILLER MTG PLATE           |
|     | 0752566F    | 1   | FORD FUEL FILLER MTG PLATE            |
| 6   | 37855L      | 1   | TOOLBOX AND OIL TANK MTG BRACKET - LH |
| 7   | 37855R      | 1   | TOOLBOX AND OIL TANK MTG BRACKET - RH |
| 8   | 37760       | 1   | TANDEM BOX SPACER CHANNEL (OPT)       |

Section V - PARTS

48" STEEL TOOLBOX

SERIES 10 FUEL FILL MOUNTING BRACKETS

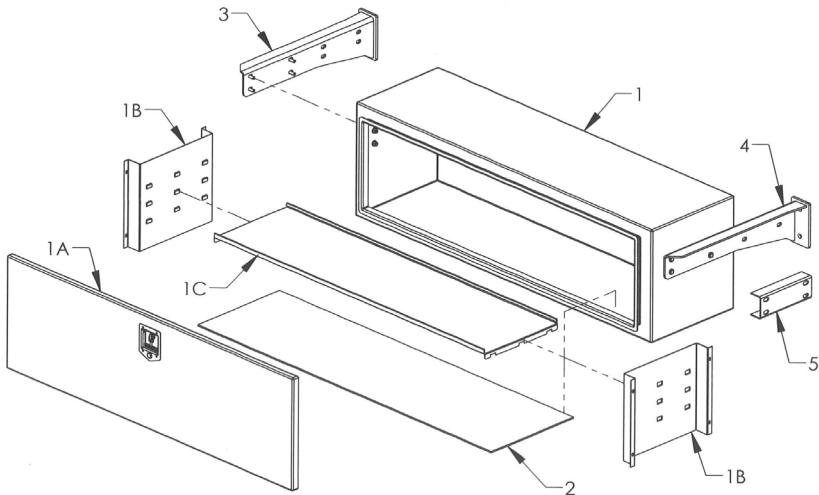


NOTE: 174016022 DOES NOT INCLUDE MOUNTING BRACKETS

| REF | PART #      | QTY | DESCRIPTION                           |
|-----|-------------|-----|---------------------------------------|
| 1   | 174016022   | 1   | STEEL TOOLBOX 48"                     |
| 1A  | 174016022D  | 1   | DOOR ASSEMBLY                         |
| 1B  | 07002918    | 1   | STEEL TOOLBOX INSIDE PANEL            |
| 1C  | 07002919-48 | 2   | STEEL TOOLBOX 48" SHELF               |
| 2   | 0308758     | 1   | TOOLBOX MAT 48"                       |
| 3   | 0811136L    | 1   | FORD/DODGE TOOLBOX MTG BRACKET - LH   |
| 4   | 0811136R    | 1   | FORD/DODGE TOOLBOX MTG BRACKET - RH   |
| 5   | 0752566     | 1   | DODGE FUEL FILLER MTG PLATE           |
|     | 0752566F    | 1   | FORD FUEL FILLER MTG PLATE            |
| 6   | 37855L      | 1   | TOOLBOX AND OIL TANK MTG BRACKET - LH |
| 7   | 37855R      | 1   | TOOLBOX AND OIL TANK MTG BRACKET - RH |
| 8   | 37760       | 1   | TANDEM BOX SPACER CHANNEL (OPT)       |

Section V - PARTS

60" STEEL TOOLBOX LCG - 174016023

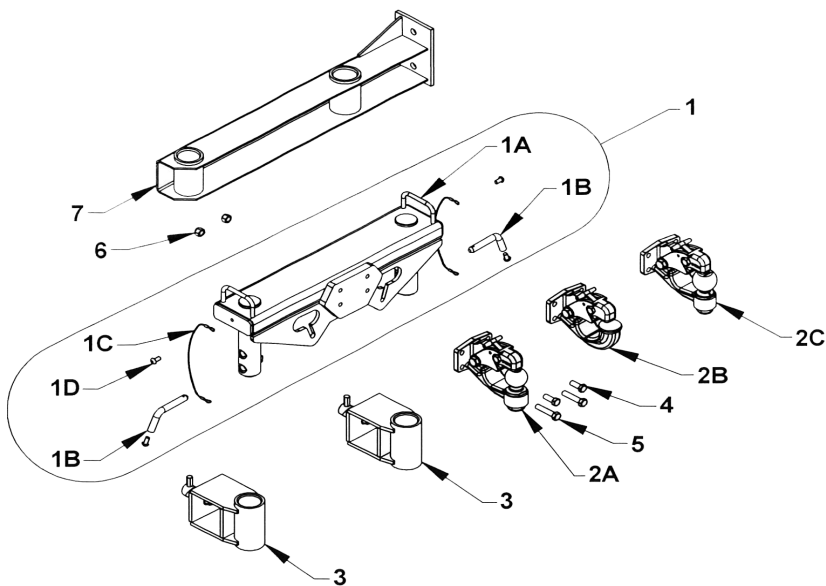


NOTE: 174016023 DOES NOT INCLUDE MOUNTING BRACKETS

| REF | PART #      | QTY | DESCRIPTION                                 |
|-----|-------------|-----|---------------------------------------------|
| 1   | 174016023   | 1   | STEEL TOOLBOX 60" WITH STAINLESS STEEL DOOR |
| 1A  | 174016023D  | 1   | SS DOOR ASSEMBLY                            |
| 1B  | 07002918    | 2   | STEEL TOOLBOX INSIDE PANEL                  |
| 1C  | 07002919-60 | 1   | STEEL TOOLBOX 60" SHELF                     |
| 2   | 0308837     | 1   | TOOLBOX MAT 60"                             |
| 3   | 37855L      | 1   | TOOLBOX AND OIL TANK MTG BRACKET-LH         |
| 4   | 37855R      | 1   | TOOLBOX AND OIL TANK MTG BRACKET-RH         |
| 5   | 37760       | 1   | TANDEM BOX SPACER CHANNEL (OPT)             |

Section V - PARTS

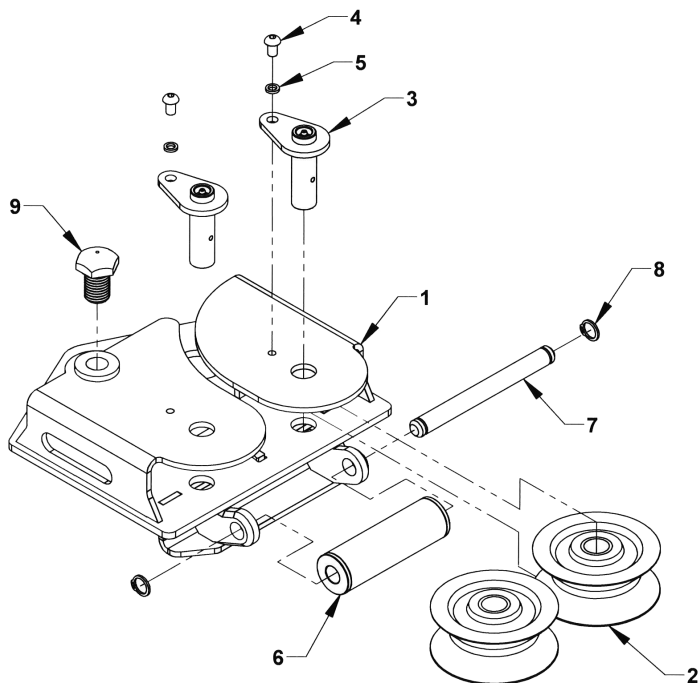
PINTLE ATTACHMENT GROUP



| REF | PART #    | QTY | DESCRIPTION                                            |
|-----|-----------|-----|--------------------------------------------------------|
| 1   | 66370G    | 1   | PINTLE ATTACHMENT                                      |
| 1A  | 66370     | 1   | PINTLE ATTACHMENT WELDMENT                             |
| 1B  | 66378     | 2   | RETAINING PIN                                          |
| 1C  | 65292     | 2   | LANYARD                                                |
| 1D  | 0403004   | 4   | BOLT BHCS 3/8-16 x 3/4                                 |
| 2A  | 174017159 | 1   | TOW BALL PINTLE HITCH - 2 IN. BALL                     |
| 2B  | 174017156 | 1   | PINTLE HOOK                                            |
| 2C  | 174017172 | 1   | TOW BALL PINTLE HITCH - 2-5/16 IN. BALL                |
| 3   | 65460     | 1   | FORK HOLDER - 3.5 x 3.5                                |
| 4   | 04000005  | 2   | BOLT HHCS 1/2-13 x 1.25 GRADE 8<br>SECURE WITH LOCTITE |
| 5   | 0403056   | 2   | BOLT HHCS 1/2-13 x 2-1/2 GRADE 8                       |
| 6   | 0400408   | 2   | NUT, NYLOK 1/2-13                                      |
| 7   | 66385     | 1   | PINTLE ATTACHMENT STORAGE BRACKET                      |

## Section V - PARTS

### RECOVERY ROLLER GUIDE ATTACHMENT - 09018752 (STEEL ONLY)



| REF | PART#.   | QTY | DESCRIPTION                        |
|-----|----------|-----|------------------------------------|
| 1   | 08016353 | 1   | RECOVERY ROLLER GUIDE ATTACHMENT   |
| 2   | 09018753 | 2   | PULLY, CABLE ROLLER GUIDE          |
| 3   | 08008889 | 2   | KEEPER PIN, CABLE ROLLER GUIDE     |
| 4   | 0403161  | 2   | BOLT, BHCS, 3/8-16 UNC x 5/8       |
| 5   | 0400464  | 2   | LOCK WASHER 5/16                   |
| 6   | 0809640  | 1   | ROLLER ASSEMBLY 1.75 INCH DIAMETER |
| 7   | 07013385 | 1   | PIN, CABLE ROLLER GUIDE            |
| 8   | 03012289 | 2   | RETAINING RING 3/4 SHAFT OD        |
| 9   | 07013420 | 1   | BOLT, HHCS, 1-8 UNC x 1-1/2        |

## Section VI - INSTALLATION

The information found in this section covers installation of the **Series 10 Gen II** on Ford, Chevrolet & International truck chassis. Should you require information or assistance concerning installation on another make chassis, contact:

**MILLER INDUSTRIES PA OPERATIONS**  
**Hermitage, PA 16148**

Before attempting installation, thoroughly read your Owner's Manual & Warranty. Become familiar with the different parts, their function and general location. **BE SAFE!** Exercise caution when handling the larger components of the unit. **MAKE CERTAIN** your handling equipment has the load capabilities for lifting and transporting the carrier assembly to the truck chassis for installation.



**THE CARRIER WEIGHS APPROXIMATELY 5,000 LBS. (ALUMINUM), 6,500 LBS. (STEEL). THEREFORE, DURING INSTALLATION ON THE CHASSIS, ONLY AN OVERHEAD CRANE OR MOBILE LIFTING DEVICE OF SUFFICIENT LOAD CAPACITY RATING SHOULD BE USED.**

## Section VI - INSTALLATION

### TRUCK FRAME PREPARATION

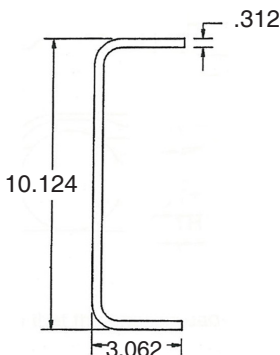
Make sure the frame height at the burn-off does not exceed 37 inches. Also make sure that the strength of the truck frame meets or exceeds Miller's guide lines for resistive bending moment (RBM) for each frame rail. On Series 10 carriers the guide lines are as follows:

| CARRIER LENGTH | FRAME RBM          |
|----------------|--------------------|
| 19             | 500,000 in. • lbs. |
| 19.5           | 500,000 in. • lbs. |
| 21             | 600,000 in. • lbs. |
| 21.5           | 600,000 in. • lbs. |
| 22             | 600,000 in. • lbs. |

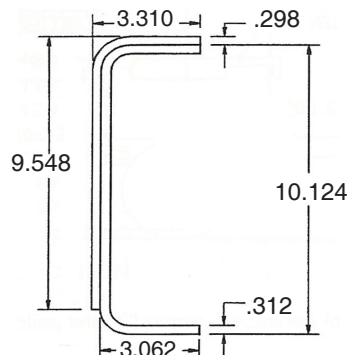
If you do not know the RBM for the truck you are installing, call your chassis dealer and find out what it is. If the dealer does not know the RBM, then find out the section modulus and yield strength rating. Once the section modulus and yield strength are known, the RBM can be found by multiplying these two numbers together.

The RBM quantitatively describes how strong the frame is. The section modulus quantitatively describes how strong the shape of the frame is. And the yield strength quantitatively describes how strong the steel in the frame is. Therefore, the frame RBM is found by taking the strength of the frame's shape and multiplying it by the strength of the frame's steel.

Shown below are two International frame rail examples. The first frame is a single 5/16 rail. The second frame is a 5/16 rail reinforced with 1/4 inverted L.



Section Modulus = 12.48 in.<sup>3</sup>  
Yield Strength = 50,000 PSI  
RBM = 12.48 x 50,000 = 624,000 in. • lbs.



Section Modulus = 17.05 in.<sup>3</sup>  
Yield Strength = 50,000 PSI  
RBM = 17.05 x 50,000 = 852,500 in. • lbs.

Notice that the reinforced frame has a higher RBM than the single frame because the section modulus is greater when the frame is reinforced.



## Section VI - INSTALLATION

### TRUCK FRAME PREPARATION

From the chart the minimum frame strength specification for Series 10 carriers is 500,000 in. • lbs. Japanese truck frames on cab-over trucks are typically less than this and they rely on fixed bodies like van boxes and stake beds fastened along their entire length to reinforce the truck frame. Carriers are movable bodies that do not reinforce the truck frame and they can be operated in a way that can over stress and break the truck frame. Make sure to reinforce truck frames with an RBM strength rating that is less than 500,000 in. • lbs. for each frame rail.

Do not weld truck frame anywhere forward of the frame cut off. Do not drill holes in the truck frame flanges or in the web any closer than 2-1/4 inches from the frame flanges.

### GENERAL TRUCK FRAME PRACTICES TO BE AWARE OF BEFORE INSTALLING THE CARRIER

1. The only permissible place to burn or weld on a truck frame is at the frame cutoff. Do not weld or burn (oxy-acetylene torch or plasma torch) on a truck frame anywhere else.
2. Before welding the subframe hinge angle to the truck frame, disconnect the batteries to protect the chassis computer and electrical system.
3. Bolt holes are to be drilled, not burned.
4. When drilling holes into the side of a truck frame, use a steel plate inside the frame to protect wires and air hoses from the drill bit piercing through.
5. Never drill holes in or near the frame flanges. Never drill a hole in the side of a frame any closer to the flanges than the chassis builder did. It is recommended that drilled holes in the side of the truck frame be at least 2-1/4" away from the frame flanges.
6. The distance between frame holes should be at least twice the diameter of the larger hole.
7. The bolt hole diameter should not be more than 1/16" larger than the bolt diameter.
8. Avoid removing chassis crossmembers. It is preferred to move them to a new position out of the way. Truck frame hinge angles are not a replacement for a chassis crossmember. Truck frame hinge angles are to be used in addition to the rear suspension crossmember. **IF** the frame cutoff gets into a rear chassis crossmember, **THEN** move the rear chassis crossmember forward a few inches.
9. Inboard tilt cylinder saddles are not a replacement for a chassis crossmember. **IF** the inboard saddle interferes with a chassis crossmember, **THEN** try to plan the frame cutoff so that the drive shaft carrier bearing angle can remount to the front face of the inboard saddle. **DO NOT** rotate the carrier bearing mounting angle opposite of the way it was mounted by the chassis builder. Move the interfering chassis crossmember forward just enough to be out of the way of the saddle. Chassis builders do not want excessive distance between the chassis crossmembers.
10. **IF** there is too much interference between the inboard tilt cylinder saddle and a drive shaft carrying crossmember, **THEN** switch the inboard tilt cylinder saddle to the outboard saddle system with lower connecting angle.

## Section VI - INSTALLATION

### POWER TAKE-OFF (AUTOMATIC TRANSMISSION)



#### CAUTION

**DISCONNECT BATTERY BEFORE PERFORMING ANY WELDING ON CHASSIS TO PREVENT DAMAGE TO ELECTRONIC COMPONENTS!**

Make sure the combination of transmission and PTO selected have an output ratio between 100% and 110%, preferably closer to 100%. A proper output ratio is necessary to achieve a proper hydraulic flow rate. Excessive flow rate will cause excessive heat which can cause hydraulic component damage. There is a point at which a PTO output ratio that is too high will produce extra heat instead of more speed because the extra oil cannot get through the control valve.

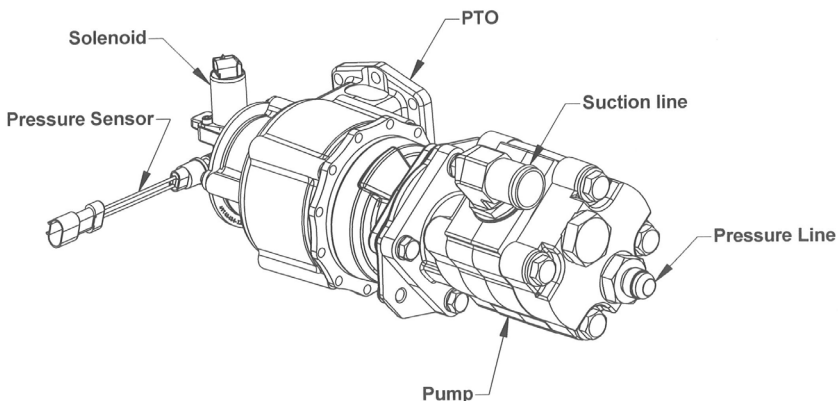
Drain the transmission fluid into a large clean container to be re-used later.

Install the PTO to the transmission. Refer to the instructions included with the PTO. Make sure that the mounting studs and bolts are fastened with Loctite and properly torqued according to the PTO manufacturer's specifications.

Determine the desired hose routing from the pump. The bi-directional pump provides 1-1/4 inch SAE side ports and 1 inch SAE rear ports. Insert the pressure and return line fittings into the pump.

Pack the female pilot of the PTO pump shaft with grease before installing the pump on the PTO (reference Chelsea grease pack 379688).

Install the pump onto the PTO as shown.



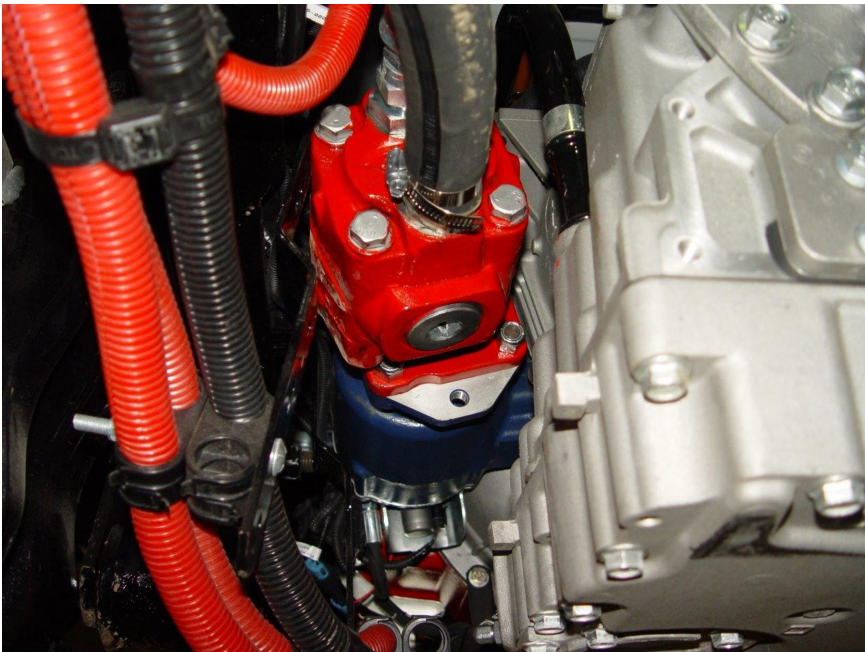
Refill the transmission with the previously drained transmission fluid.

## **Section VI - INSTALLATION**

### **POWER TAKE-OFF**

#### **(AUTOMATIC TRANSMISSIONS)**

Follow the PTO instructions supplied by the PTO manufacturer that are included with the PTO. Hot shift PTO's on automatic transmissions are torque converter driven. The torque converter must be instructed to lock up when the PTO is activated. The on board computer must be programmed to lock up the torque converter when the PTO is engaged. On some trucks the PTO must be wired to pin 43 of the TCM. On some trucks the PTO must be wired to pin 42 of the TCM. The individual installing the PTO must be aware that the PTO is being wired and activated in a way that locks up the torque converter. The carrier without a load or with a light load may operate fine if the torque converter is not slipping while also not instructed to lock up. The carrier hydraulics may also operate sluggishly or with insufficient power with a light load or a heavy load when the torque converter is not locked up. A torque converter that slips will cause the pump to intermittently turn or stop turning. A pump that stops turning may give the false appearance of a control valve pressure problem. If the carrier hydraulics perform sluggishly, it may be necessary to have a chassis dealer perform diagnostic testing to determine if the torque converter is programmed to lock up on PTO engagement.

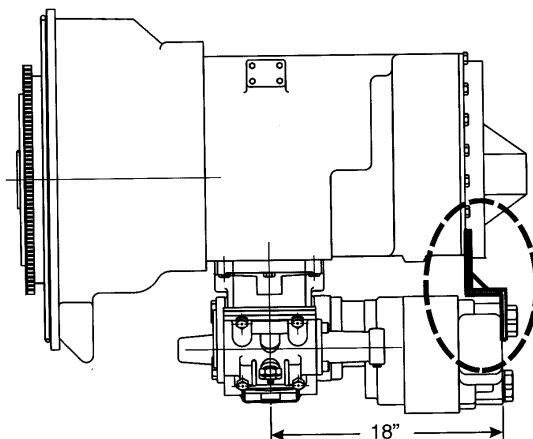


## Section VI - INSTALLATION

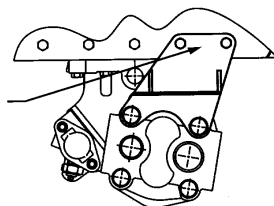
### REAR PUMP SUPPORT

If the direct mounted pump exceeds 40 lbs. or if the combined length of the pump and the PTO exceeds 18 inches, then an additional support bracket hung from the transmission to the back of the pump is required. The Permco 24 GPM pump along with its pressure and return fittings supplied by Miller weighs 37.7 lbs. It is assembled with extended rear studs for mounting a support bracket. Factory installed carriers equipped with a 24 GPM pump are supplied with a rear pump support pump bracket for insurance.

#### Direct Mount Pump Support Recommendations



Note: For proper bracketing attach at 2 or more transmission bolt locations and 2 or more pump locations.



## CAUTION

Use caution to ensure that bracket does not pre-load pump/PTO mounting.

The PTO warranty will be void if a pump bracket is not used when:

1. The combined weight of pump, fittings and hose exceed **40 lbs.**
2. The combined length of the PTO and pump is more than **18 inches** from the PTO centerline to the end of the pump.

## Section VI - INSTALLATION

### CHASSIS PREPARATION

The following diagrams show recommended chassis installation layout configurations for cab-to-axle (CA) dimensions 120, 138, 144, 150, and 156 inches for Series 10 GEN II carriers. These diagrams are color coded and should be used as a general guide for properly locating the carrier on the chassis. There are up to 3 possible layout configurations for each different CA. These configurations are:

1. Cab protector mounted to front of bed (YELLOW).
2. Narrow 5-inch base pylon mounted to the truck frame behind the cab (GREEN).
3. 12 inch FMP and SP-8000 side puller mounted to the truck frame behind the cab (MAGENTA).

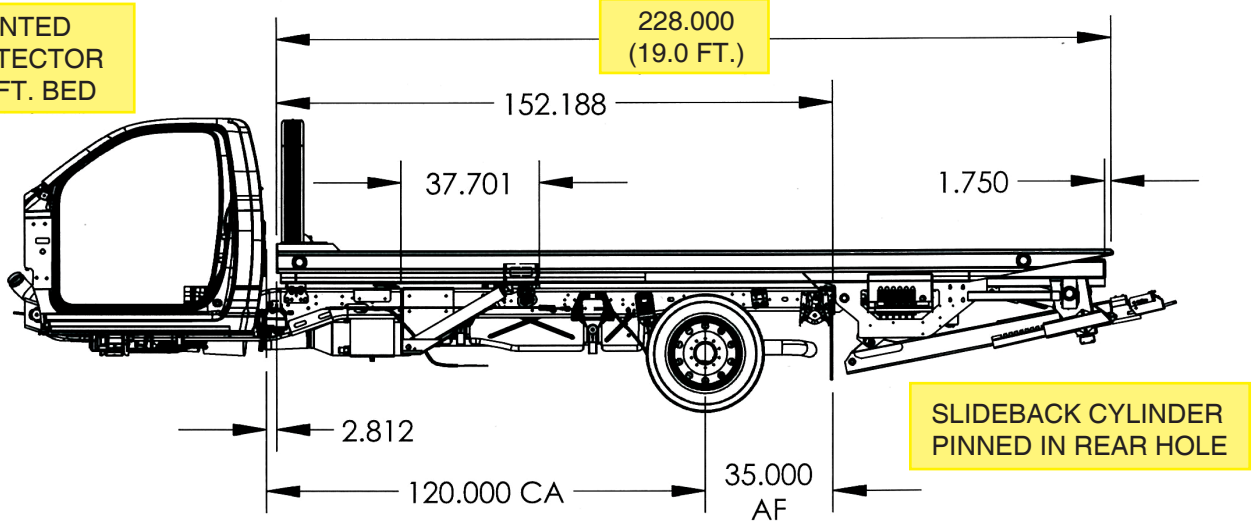
The Series 10 GEN II beds are made in incremental lengths of 6 inches. Configuration 2 uses a bed length 6 inches shorter than configuration 1. Configuration 3 uses a bed length 12 inches shorter than configuration 1 for the same CA.

There can be certain chassis configurations that may require some dimensional adjustment from what is shown in the diagrams. Be aware of the following considerations when planning the installation layout. These situations will affect the air gap behind the cab, and the frame cut-off. Mark the subframe crossmember locations on the truck frame before cutting the truck frame to verify inboard oil tank and frame mounted pylons fit as intended.

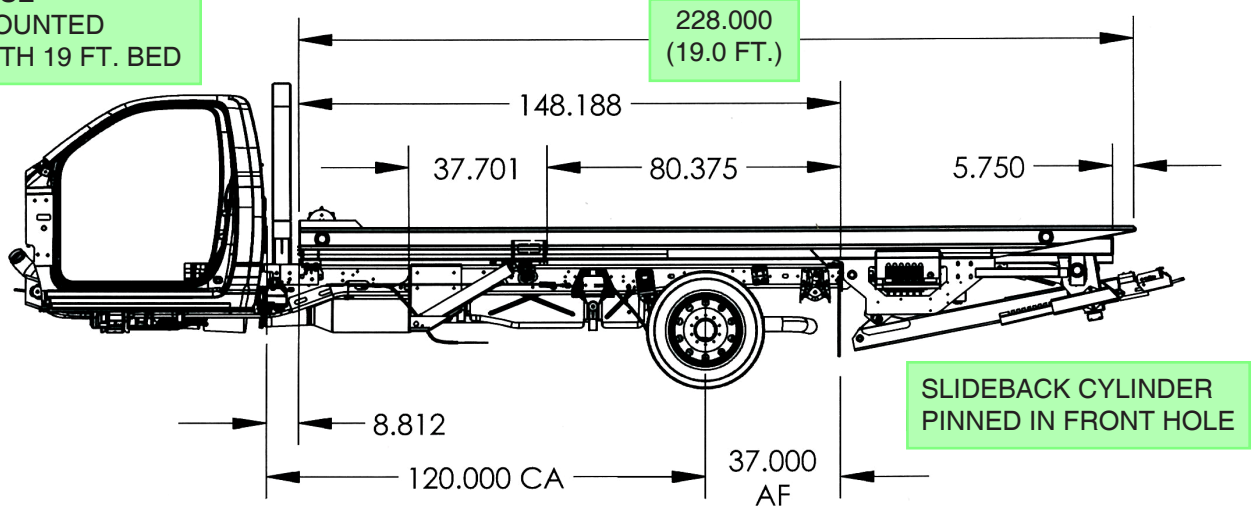
1. Some chassis may require extra room behind the cab to allow for cab air bag deflation, protruding rear windows, and vertical exhausts. Frame mounted pylons and side pullers may also require extra space to fit with chassis components such as battery boxes, air dryers, crossmember bolts, and some fuel tank brackets.
2. Some chassis may have slight interference between the crossmember that carries the drive shaft and the inboard tilt cylinder saddle. This circumstance may happen on Ford F650 and International 4300 chassis. A 33-1/2 or 34 inch frame cut off will alleviate this interference.
3. Some Ford F650 and International 4300 chassis have the carrier bearing hanger bracket located 66 inches forward of the rear axle center. On these chassis with this situation, plan the frame cut off so that the carrier hanger bracket will remount to front of the inboard saddle after its crossmember is remounted 8 to 12 inches forward of the saddle.

# LAYOUT CONFIGURATION FOR FORD F550/DODGE 5500 WITH 120CA

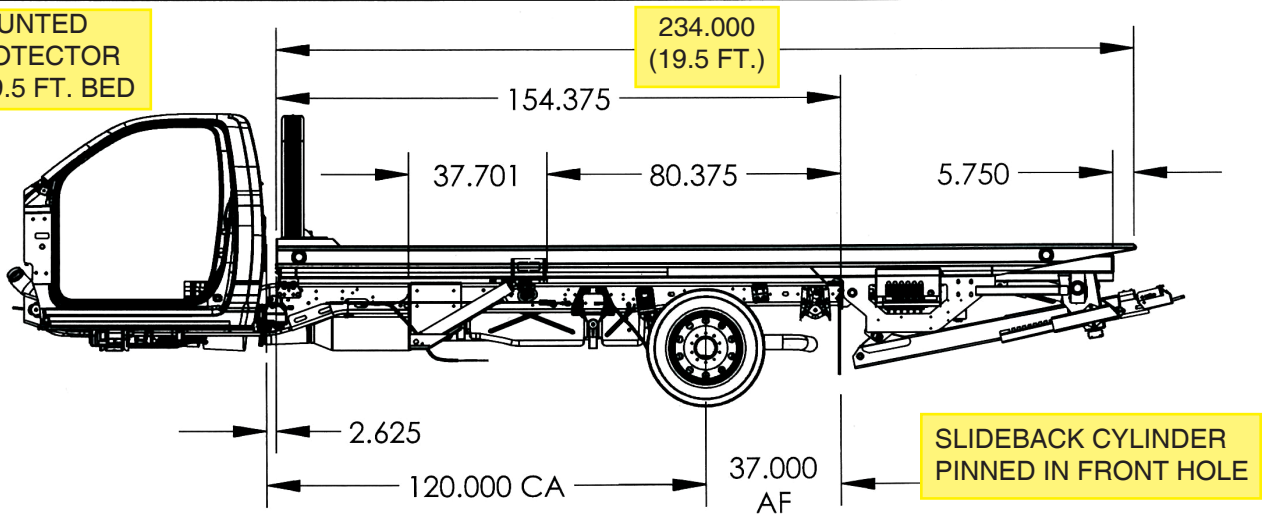
BED MOUNTED  
CAB PROTECTOR  
WITH 19 FT. BED



5 INCH BASE  
FRAME MOUNTED  
PYLON WITH 19 FT. BED



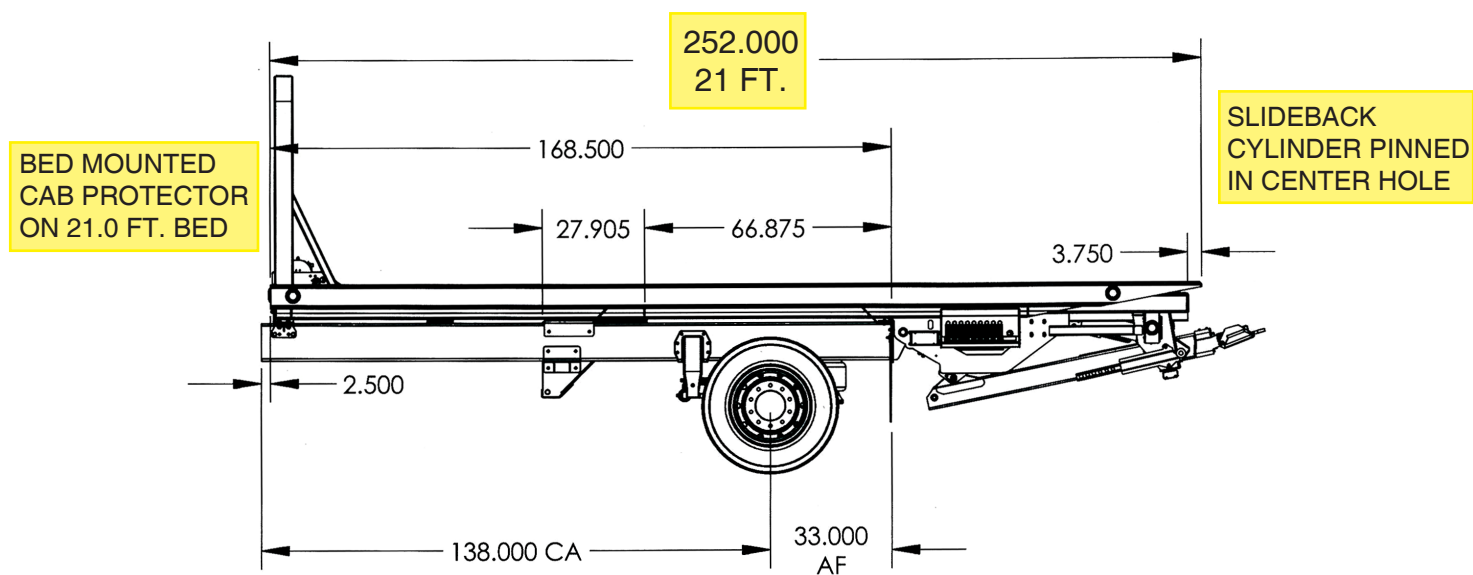
BED MOUNTED  
CAB PROTECTOR  
WITH 19.5 FT. BED



CA = CAB TO AXLE

AF = AFTER FRAME

## LAYOUT CONFIGURATION FOR SERIES 10 GEN II CARRIER - 138 CA INBOARD TILT

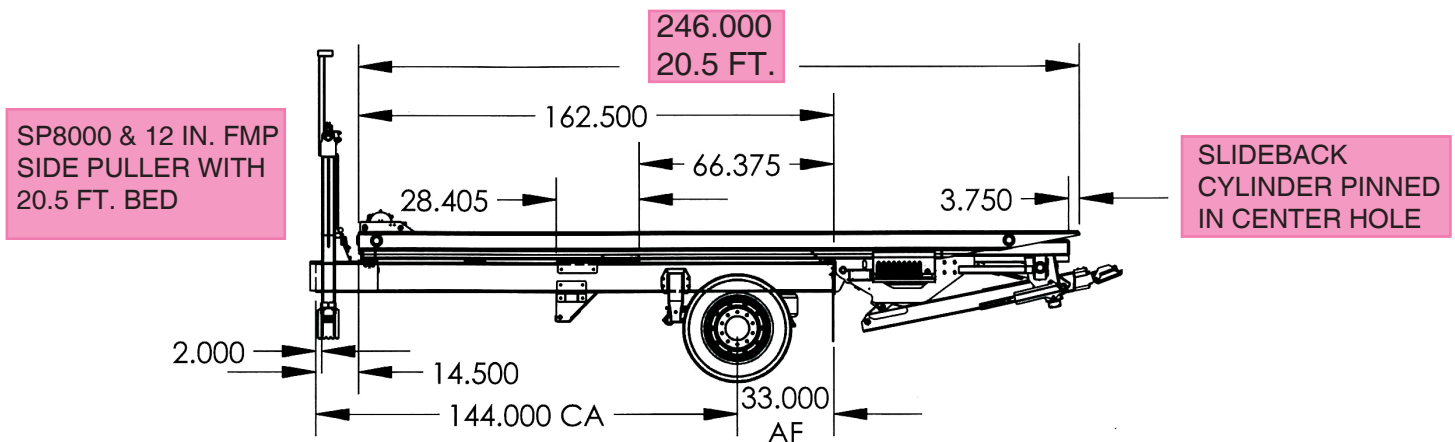
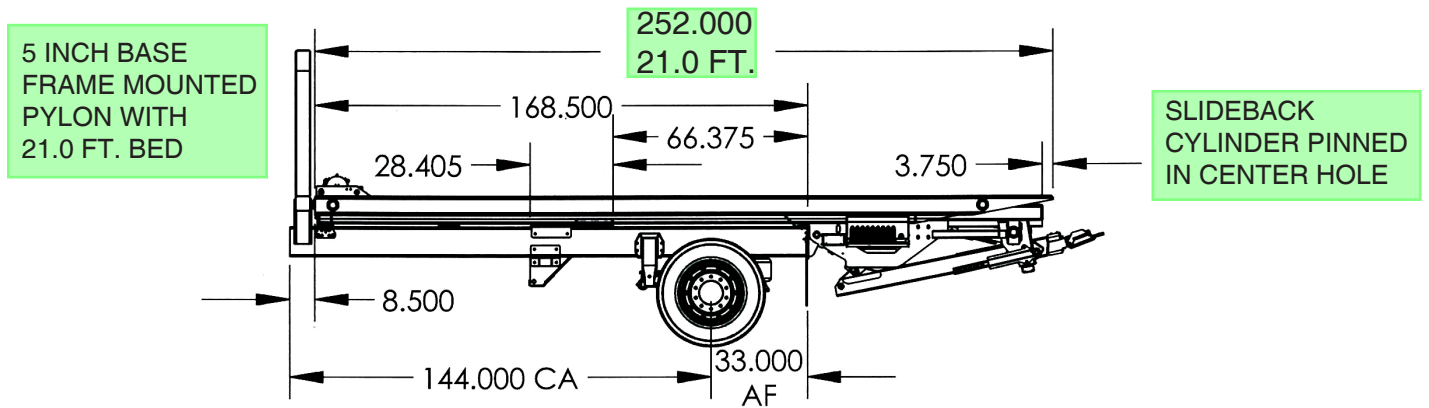
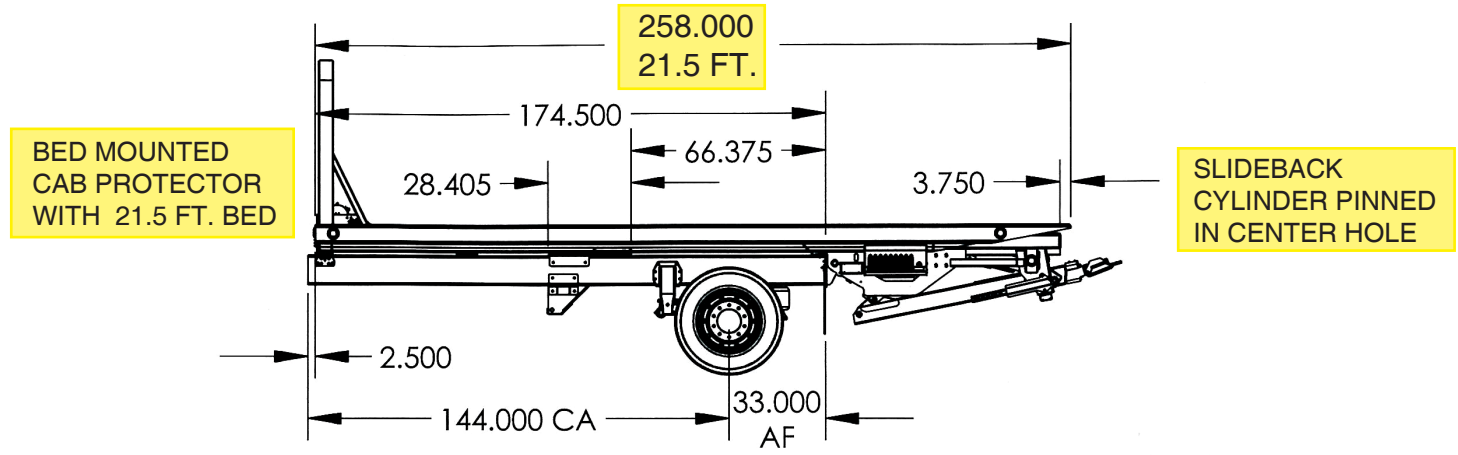


**CA = CAB TO AXLE**

**AF = AFTER FRAME**



# LAYOUT CONFIGURATION FOR SERIES 10 GEN II CARRIER - 144 CA



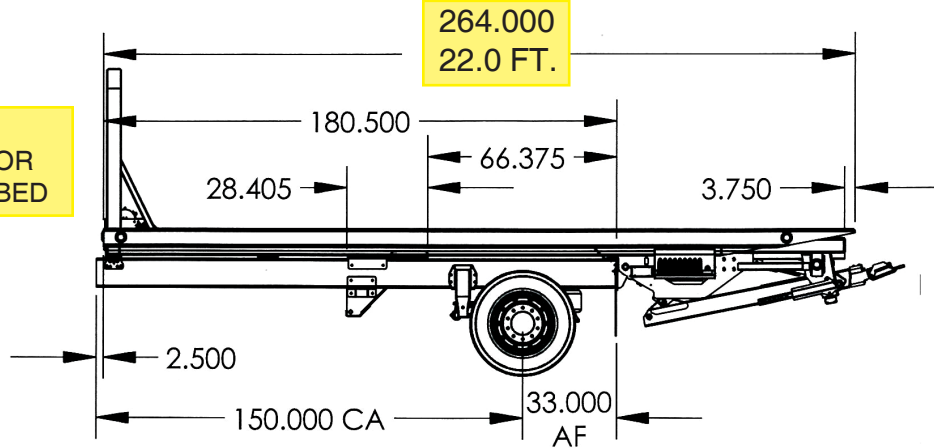
**CA = CAB TO AXLE**

**AF = AFTER FRAME**



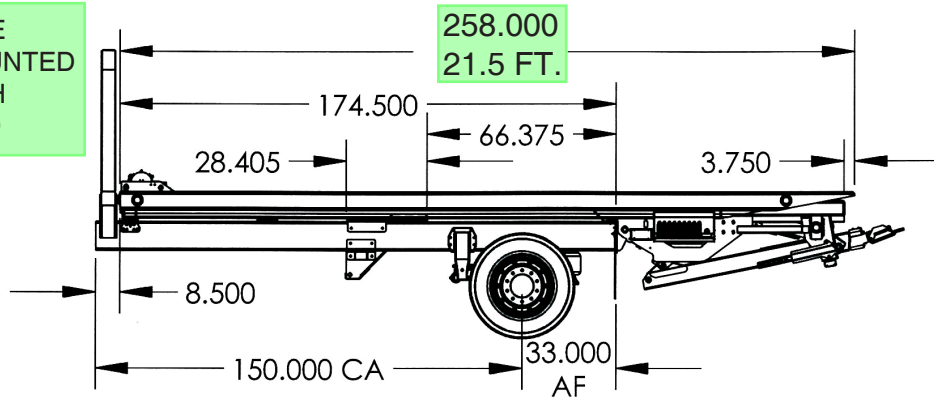
# LAYOUT CONFIGURATION FOR SERIES 10 GEN II CARRIER - 150 CA

BED MOUNTED  
CAB PROTECTOR  
WITH 22.0 FT. BED



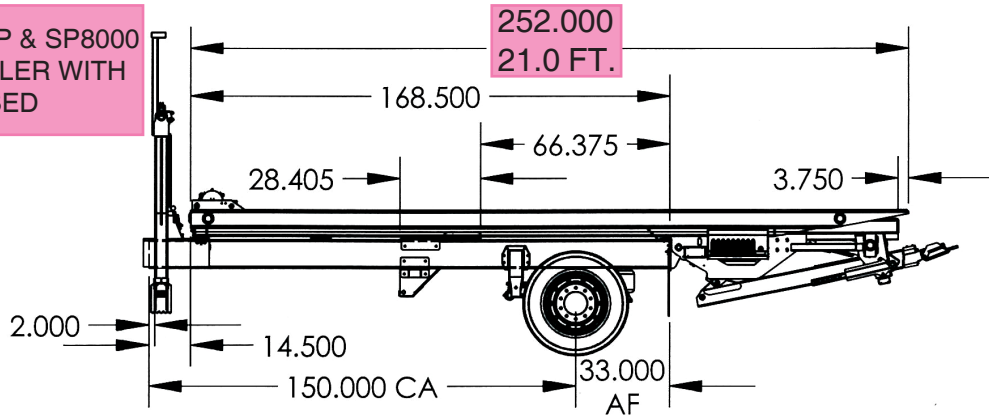
SLIDEBACK  
CYLINDER PINNED  
IN CENTER HOLE

5 INCH BASE  
FRAME MOUNTED  
PYLON WITH  
21.5 FT. BED



SLIDEBACK  
CYLINDER PINNED  
IN CENTER HOLE

12 IN. FMP & SP8000  
SIDE PULLER WITH  
20.5 FT. BED

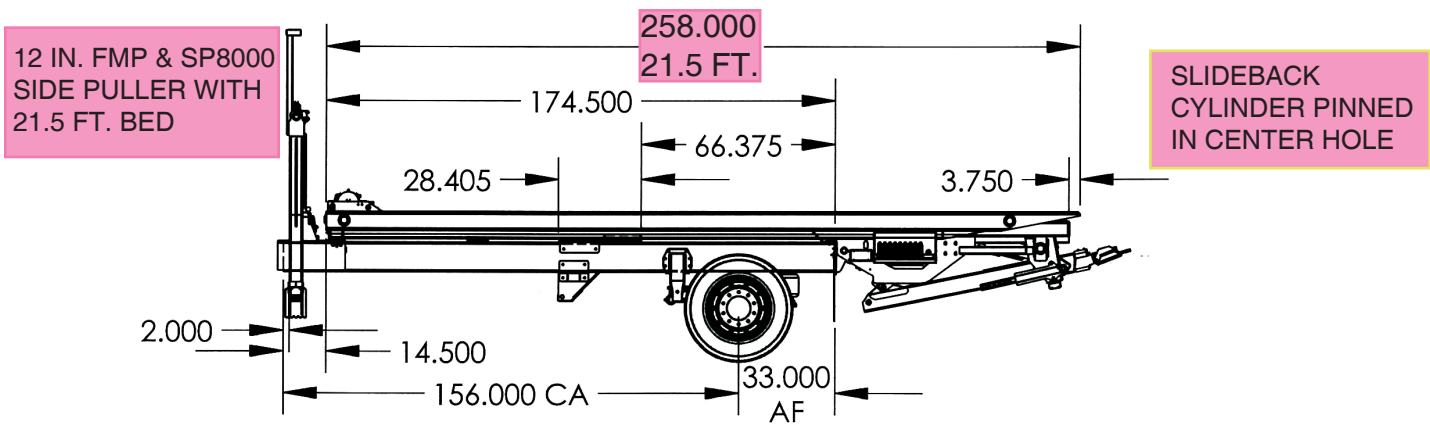
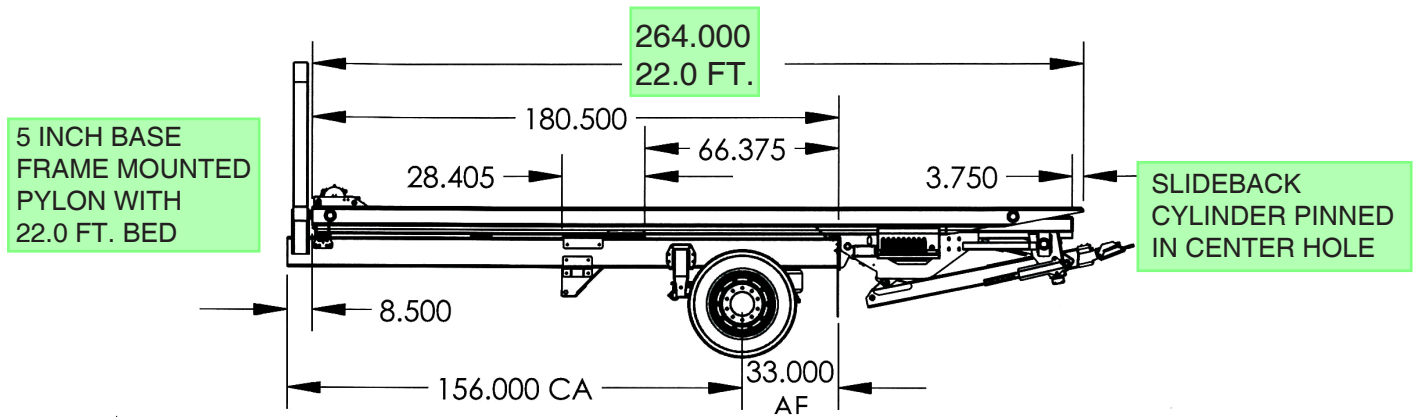


SLIDEBACK  
CYLINDER PINNED  
IN CENTER HOLE

CA = CAB TO AXLE

AF = AFTER FRAME

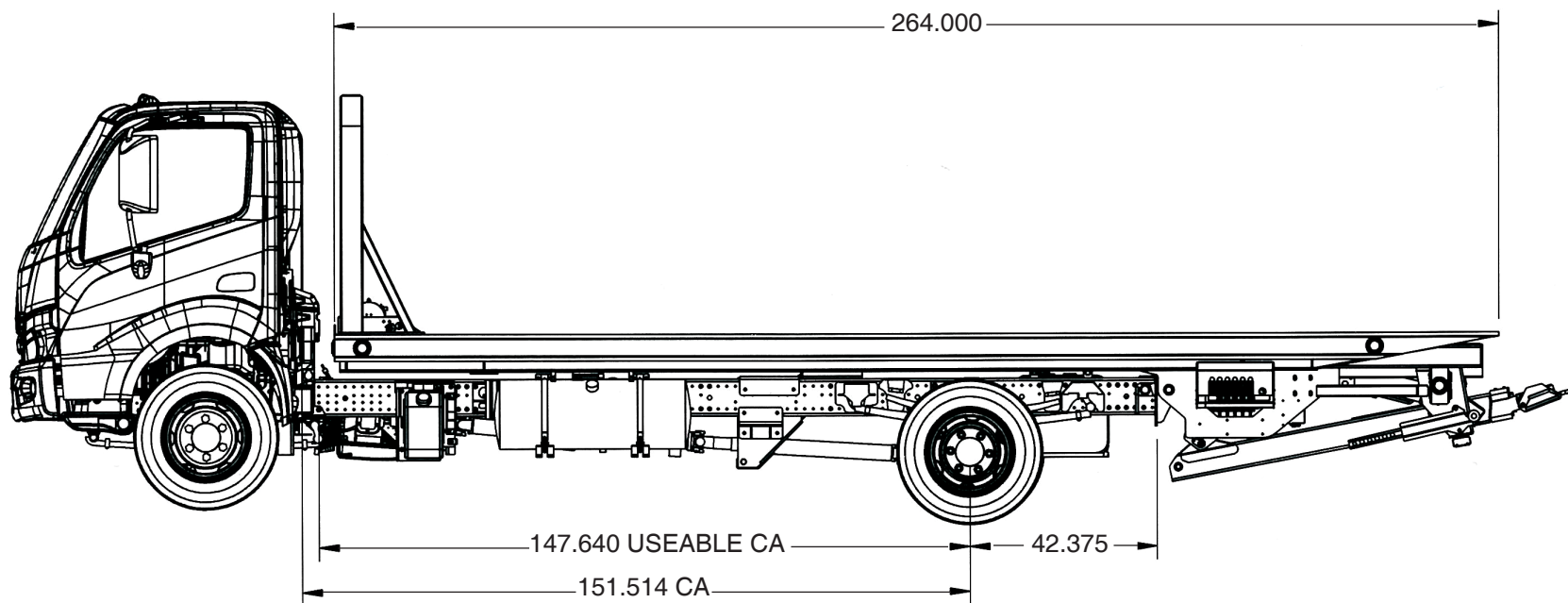
# LAYOUT CONFIGURATION FOR SERIES 10 GEN II CARRIER - 156 CA



**CA = CAB TO AXLE**

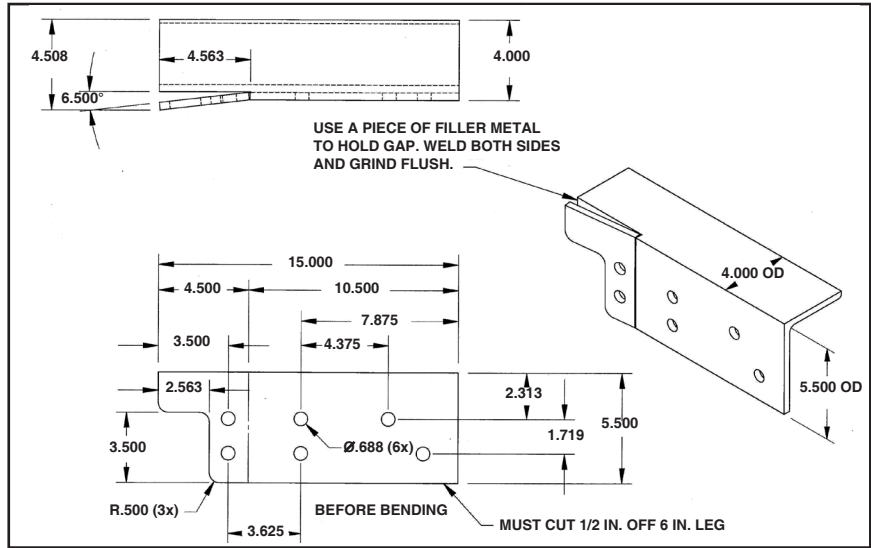
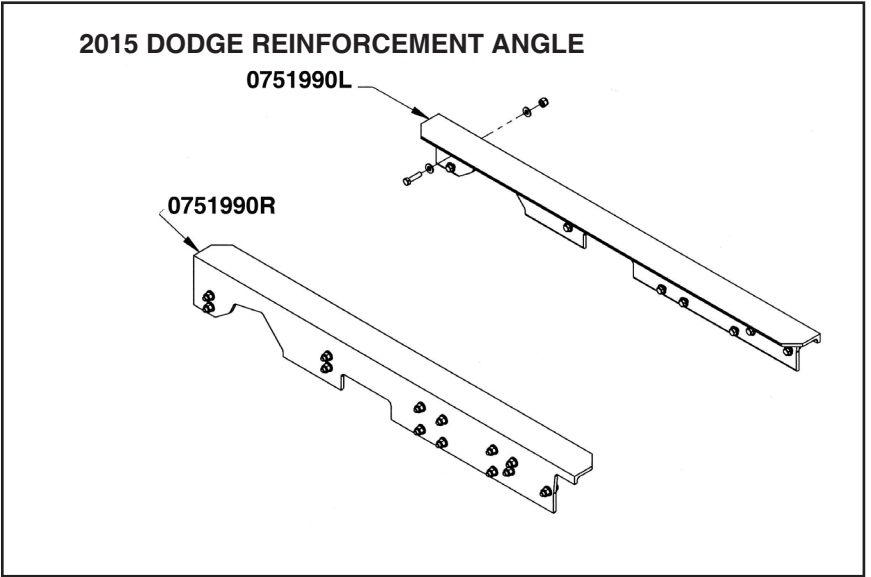
**AF = AFTER FRAME**

## HINO 195 With Rear Fuel Tank



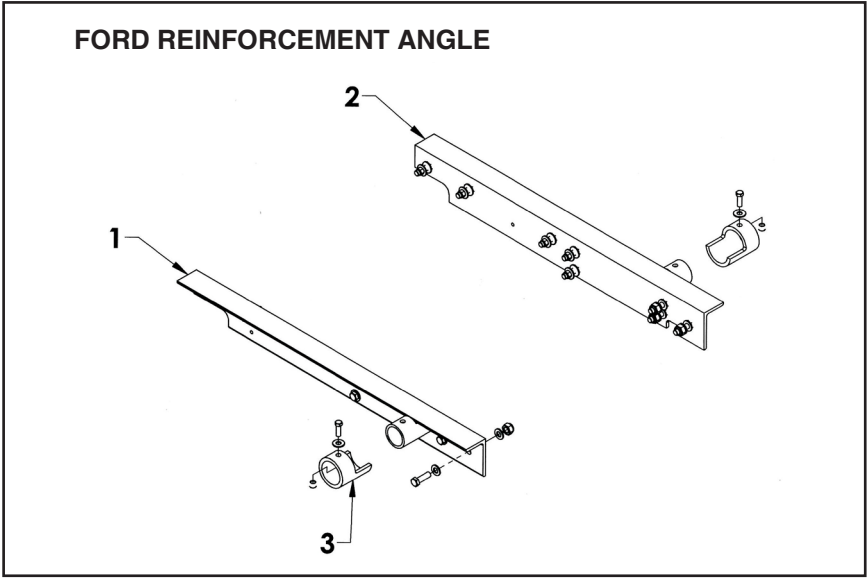
**Section VI - INSTALLATION**  
**DODGE REINFORCEMENT ANGLE**  
**WELDMENT**

The 2015 Dodge chassis have a redesigned frame. Accordingly, the frame reinforcements are changing as well. These reinforcement angle weldments are made from 6 x 4 x 3/8 angles.



**Section VI - INSTALLATION**  
**FORD REINFORCEMENT ANGLE**  
**WELDMENT**

The Ford chassis have a redesigned frame. Accordingly, the frame reinforcements are changing as well. These reinforcement angle weldments are made from 5 x 3 x 3/8 angles.



| 2015 - 2016                                        | 2017                                                 |
|----------------------------------------------------|------------------------------------------------------|
| 1. PN 0810006L<br>2. PN 0810006R<br>3. PN 0720391N | 1. PN 08003287L<br>2. PN 08003287R<br>3. PN 0720391N |

## Section VI - INSTALLATION

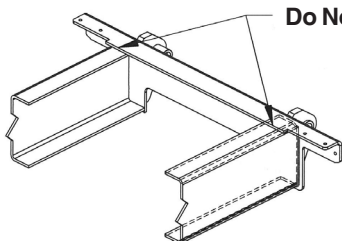
### HINGE ANGLE

Make sure the chassis frame rails are parallel on flat level pavement. If the frame rails are not parallel, the suspension may need corrected or shimmed.

#### CAUTION

If the frame rails are not parallel when the carrier is installed, the carrier will tilt unevenly so that one side lifts before the other and one side will land before the other. The left front frame height **MUST** equal the right front frame height. The left rear frame height **MUST** equal the right rear frame height. If the frame rail elevations are slightly uneven, make them match with a floor jack or jack stands before welding the hinge angle. **DO NOT** weld the hinge angle to the truck frame if the frame rails are uneven. Uneven tilting cannot be fixed when the hinge angle is welded to uneven frame rails. If the frame rails are significantly uneven get them fixed at a truck dealer before installing the subframe onto the truck.

Burn off the excess after-frame and grind the frame end straight and smooth.

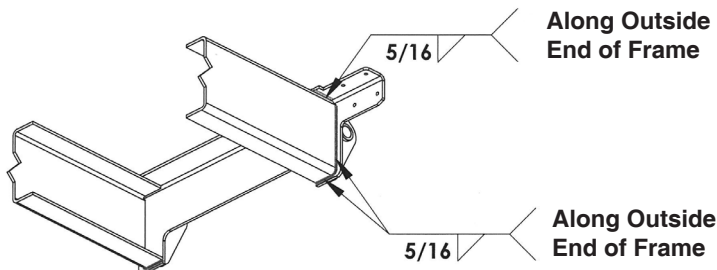


**Do Not Weld Across Top Frame Flange**



#### WARNING

The rear chassis crossmember at the frame cut-off may need to be relocated forward. **DO NOT** remove and discard this chassis crossmember. **DO NOT** rely on the hinge angle by itself to function as the rear chassis crossmember.



Pin the hinge angle to the subframe if it is not already mounted. Position the subframe on the truck frame. Make sure the subframe is centered side to side on the chassis front and back. Also make sure that the subframe is horizontally parallel with the truck frame. If the truck frame is equipped with a partial frame reinforcement, shim the hinge angle up 3/8 inch to match the frame elevations at the partial frame reinforcement. **WARNING: Do not fit the angle to the truck frame without the subframe pinned to it.**

Clamp the subframe vertically to the truck frame near the hinge and front cross member. Weld the hinge angle to the end of the truck frame. The weld bead should travel horizontally along the frame radius vertically down the frame cut-off and across the lower frame flange. **Do not** weld across the top frame flange as this can cause a stress crack. **Do not** weld anywhere else on the truck frame.

Clean and repaint the heat affected areas of the truck frame and the hinge angle.

## Section VI - INSTALLATION

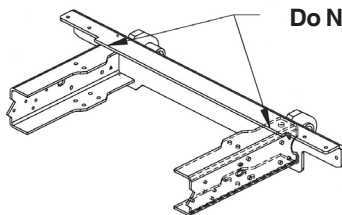
### HINGE ANGLE - FORD F550/DODGE 5500

Make sure the chassis frame rails are parallel on flat level pavement. If the frame rails are not parallel, the suspension may need corrected or shimmed.

#### CAUTION

If the frame rails are not parallel when the carrier is installed, the carrier will tilt unevenly so that one side lifts before the other and one side will land before the other. The left front frame height **MUST** equal the right front frame height. The left rear frame height **MUST** equal the right rear frame height. If the frame rail elevations are slightly uneven, make them match with a floor jack or jack stands before welding the hinge angle. **DO NOT** weld the hinge angle to the truck frame if the frame rails are uneven. Uneven tilting cannot be fixed when the hinge angle is welded to uneven frame rails. If the frame rails are significantly uneven get them fixed at a truck dealer before installing the subframe onto the truck.

Burn off the excess after-frame and grind the frame end straight and smooth.

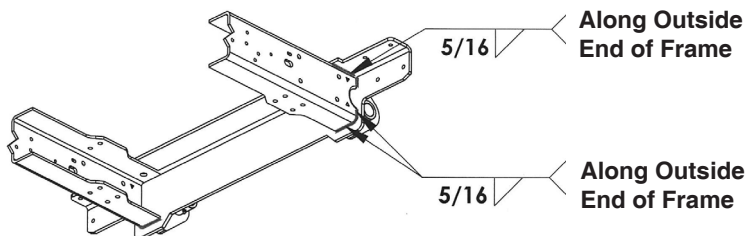


**Do Not Weld Across Top Frame Flange**



#### WARNING

The rear chassis crossmember at the frame cut-off may need to be relocated forward. **DO NOT** remove and discard this chassis crossmember. **DO NOT** rely on the hinge angle by itself to function as the rear chassis crossmember.



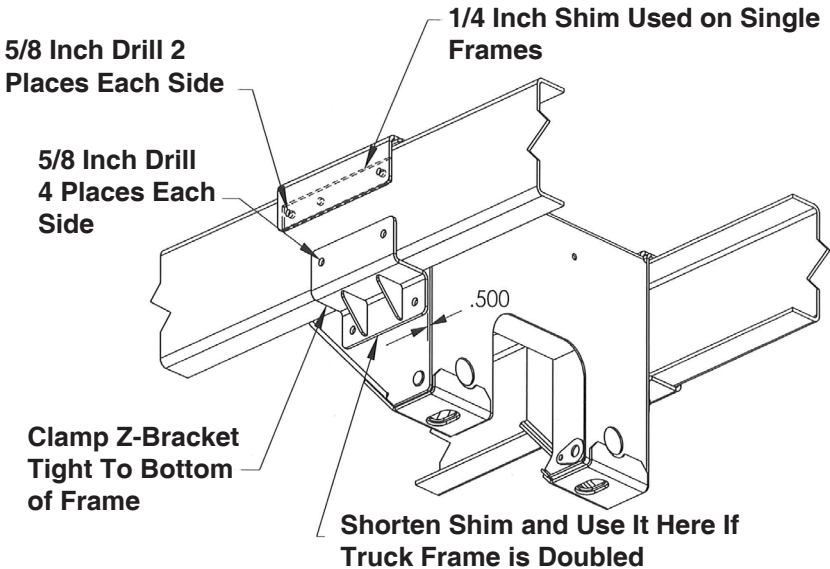
Pin the hinge angle to the subframe if it is not already mounted. Position the subframe on the truck frame. Make sure the subframe is centered side to side on the chassis front and back. Also make sure that the subframe is horizontally parallel with the truck frame. If the truck frame is equipped with a partial frame reinforcement, shim the hinge angle up 3/8 inch to match the frame elevations at the partial frame reinforcement. **WARNING: Do not fit the angle to the truck frame without the subframe pinned to it.**

Clamp the subframe vertically to the truck frame near the hinge and front cross member. Weld the hinge angle to the end of the truck frame. The weld bead should travel horizontally along the frame radius vertically down the frame cut-off and across the lower frame flange. **Do not** weld across the top frame flange as this can cause a stress crack. **Do not** weld anywhere else on the truck frame.

Clean and repaint the heat affected areas of the truck frame and the hinge angle.

## Section VI - INSTALLATION

### INBOARD SADDLE



Make sure that the tilt cylinders are completely retracted. Scribe a line on the truck frame along the back of the saddle. Reposition the saddle forward 1/8 inch. This saddle repositioning will cause the tilt cylinders to extend 1/8 inch so that the cylinders can be hydraulically pre-loaded to remove excess pin clearance that can cause the subframe to rattle against the truck frame.

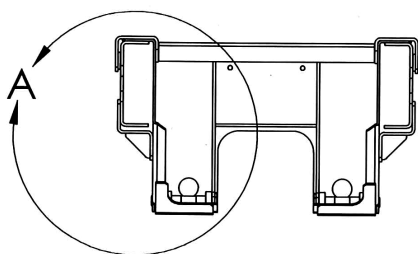
Clamp the saddles and drill 2 saddle holes into the truck frame on each side 5/8 inch diameter. Insert 1/4 inch shim if the truck frame is not doubled. Fasten the saddles with 5/8 x 2 grade 5 bolts and nylon lock nuts.

Clamp the lower saddle Z-Gusset **tight** to the underside of the truck frame with 1/2 inch setback as shown. Drill 2 top holes each side 5/8 inch diameter through the truck frame and fasten gusset to frame with 5/8 x 1-3/4 grade 5 bolts and nylon lock nuts. Drill 2 bottom holes each side 1/2 inch diameter through saddle and fasten gusset to saddle with 5/8 x 1-3/4 grade 5 bolts and nylon lock nuts. **CAUTION:** The Z-Gusset must be tight against the bottom frame flange to prevent cracking of the saddle in its horizontal bends.

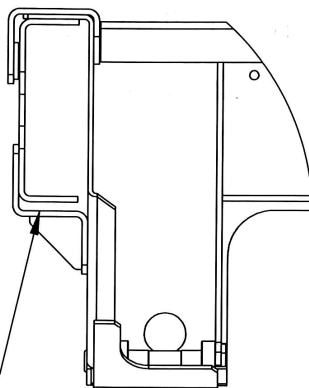


## Section VI - INSTALLATION

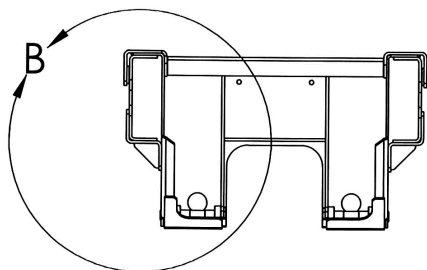
### SADDLE Z-BRACKET



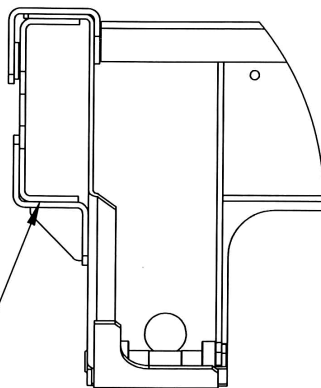
INCORRECT INSTALLATION.  
THE Z-BRACKET IS NOT TIGHT TO  
BOTTOM OF TRUCK FRAME



DETAIL A



CORRECT  
INSTALLATION



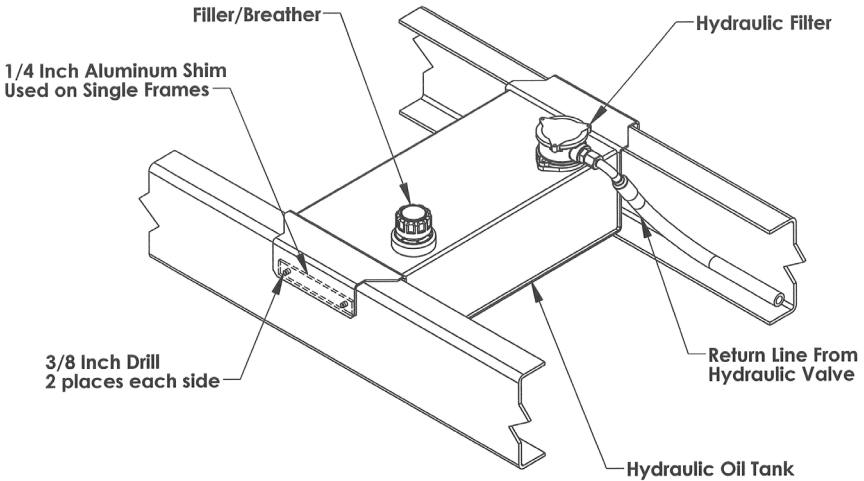
DETAIL B

## WARNING

The Z-bracket must be tight to the bottom of the truck frame to prevent the inboard saddles from flexing. If the saddle is allowed to flex, fatigue cracks may develop along the bends of the saddle and the Z-brackets.

## Section VI - INSTALLATION

### INBOARD OIL RESERVOIR



Chassis that have clear space between the frame rails use the inboard hydraulic oil tank. The inboard oil tank allows the suction and return lines to remain inside the truck frame along with the pump and control valve. Position the tank so that the return line does not interfere with a chassis crossmember. The bottom of the tank is equipped with two suction line ports to accommodate left or right side PTO installations. The unused port is closed off with an O-ring plug. Drill four 3/8 holes through the side of the frame rails and fasten the tank to the frame with 3/8 bolts and lock nuts. Chassis that do not have doubled frames require an aluminum shim as shown above.

The filter is submerged inside the tank. It is a 25 micron filter with a 30 GPM flow capacity and it is compatible with both 18 and 24 GPM pumps. The filter element can be changed by removing the top filter cover.



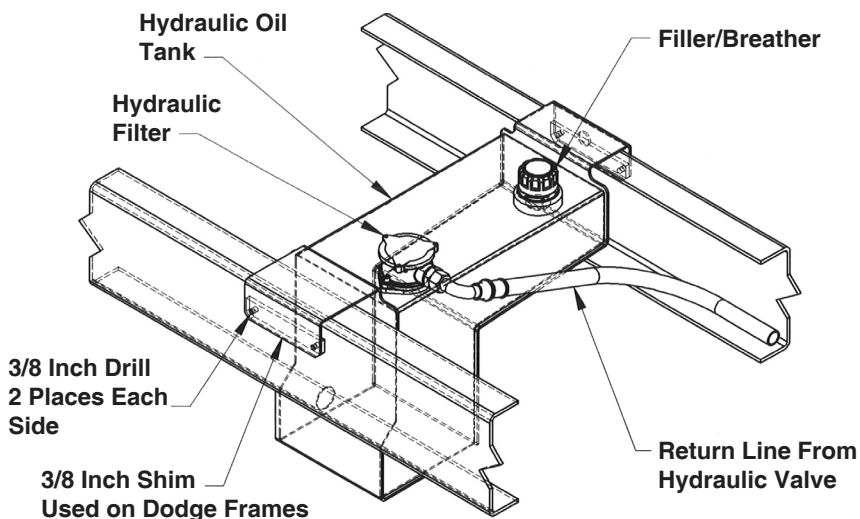
#### CAUTION

**TO PREVENT DAMAGE TO HIGH PRESSURE HOSE, USE  
EXTREME CARE WHEN ROUTING THROUGH FRAME.  
KEEP HOSES AWAY FROM EDGES THAT CAN PRESS  
INTO THE HOSES.**

## Section VI - INSTALLATION

### INBOARD OIL RESERVOIR

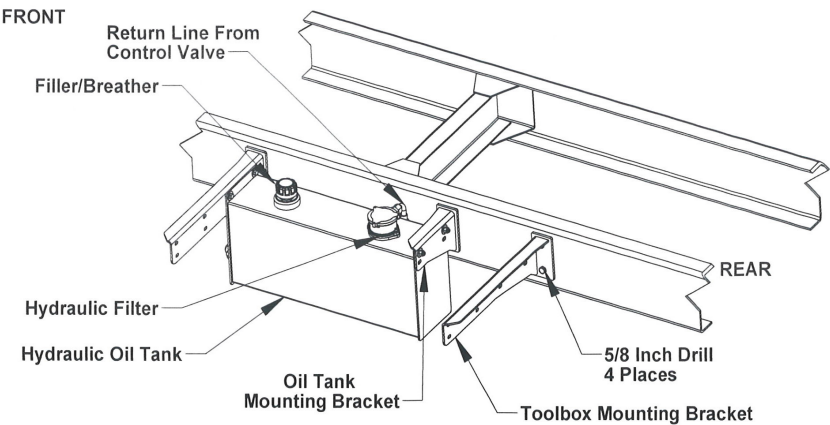
#### 2017 FORD 550/DODGE 5500



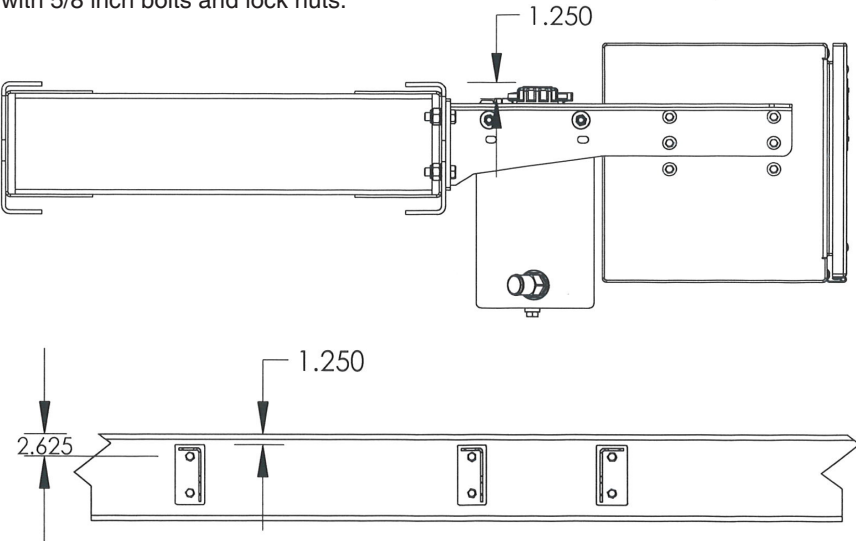
Chassis that have clear space between the frame rails use the inboard hydraulic oil tank. Ford F550 and Dodge 5500 chassis need an offset oil tank as shown to fit around the drive shaft and exhaust system. The inboard oil tank allows the suction and return lines to remain inside the truck frame along with the pump and control valve. Position the tank so that the return line does not interfere with a chassis crossmember. Drill four 3/8 holes through the side of the frame rails and fasten the tank to the frame with 3/8 bolts and lock nuts. Dodge chassis require a plastic shim as shown above.

The filter is submerged inside the tank. It is a 25 micron filter with a 30 GPM flow capacity and it is compatible with both 18 and 24 GPM pumps. The filter element can be changed by removing the top filter cover.

**Section VI - INSTALLATION**  
**OUTBOARD OIL RESERVOIR**



Chassis that do not have sufficient space between crossmembers for the inboard hydraulic oil tank use the outboard hydraulic oil tank. Position the tank so there is sufficient clearance between the top of the oil tank filler cap and the bottom of the body main rail. Be sure never to drill any holes less than 2.5 inches from the top or bottom of the truck frame. A hole too close to the frame flange will drastically reduce the strength of the frame and could result in catastrophic failure. Drill four 5/8 inch holes through the side of the frame rail and fasten the tank to the frame with 5/8 inch bolts and lock nuts.



Fasten the tank to the mounting bracket using 3/8 bolts and lock nuts.

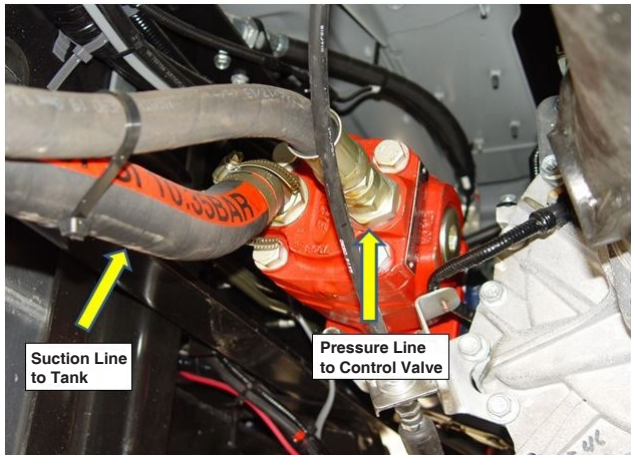
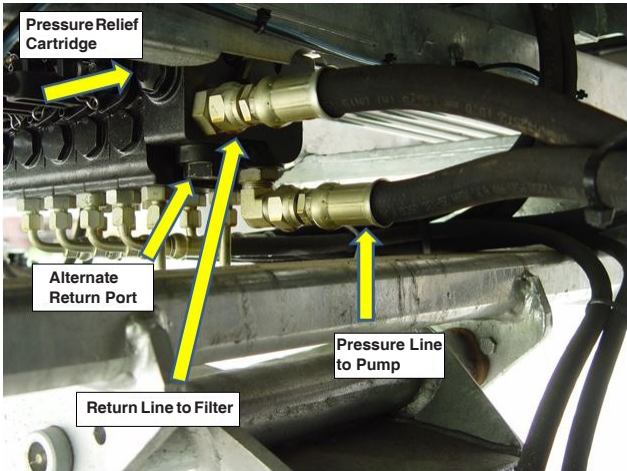
Section VI - INSTALLATION

HYDRAULIC HOOK-UP

The filter is submerged inside the tank. It is a 25 micron filter with a 30 GPM flow capacity and it is compatible with both 18 and 24 GPM pumps. The filter element can be changed by removing the top filter cover.

| PUMP      | HOSE DIAMETERS     |             |               |
|-----------|--------------------|-------------|---------------|
|           | INLET/SUCTION HOSE | RETURN HOSE | PRESSURE HOSE |
| 15 GPM    | 1-1/4              | 3/4         | 3/4           |
| 18 GPM    | 1-1/4              | 3/4         | 3/4           |
| 23-24 GPM | 1-1/2              | 1.00        | 3/4           |

Route and attach the pressure line from the inlet port of the control valve along the truck frame to one of the pressure ports on the pump. Route and attach the return line from the outlet port of the control valve along the truck frame to the inlet port of the filter. These hoses should cross over along a chassis crossmember to the passenger side truck frame rail.



## **Section VI - INSTALLATION**

### **HYDRAULIC HOOK-UP (cont'd)**

Secure the hoses to the truck frame with bolt-on rubber covered cushioned clamps.

Fill the hydraulic reservoir up to the bottom of the filler neck screen with a high quality multi-purpose Automatic Transmission fluid.

Check to make sure all hose connections are properly tightened. Plug the unconnected end of the winch hoses with suitable fittings. Reconnect the battery ground cable to the battery ground terminal.

Start the truck engine and engage the PTO. Completely cycle all cylinders to pressure by-pass in both directions at least 3 times to remove all air from the hydraulic system.



#### **CAUTION**

The slideback cylinder shaft must be vertically supported by hand while it is being extended and retracted. Failure to support the slideback cylinder shaft while it is being cycled will put excessive force on the internal seals from the extended weight of the shaft. This excessive force can damage the cylinder seals. If the seals become damaged, the cylinder may leak or drift during normal operation.

Check the oil level in the reservoir with all cylinders retracted. Refill as necessary until the oil level reaches the bottom of the filler neck screen.

## **Section VI - INSTALLATION**

### **SUBFRAMES WITH OUTBOARD TILT CYLINDERS**

Subframes with outboard tilt cylinders are for installations on chassis with inboard fuel tanks such as Ford F550 and Dodge 5500. Install frame reinforcements above the axle as shown here.



Dodge



Ford



## **Section VI - INSTALLATION**

### **OUTBOARD TILT CYLINDER HOSE ROUTING**

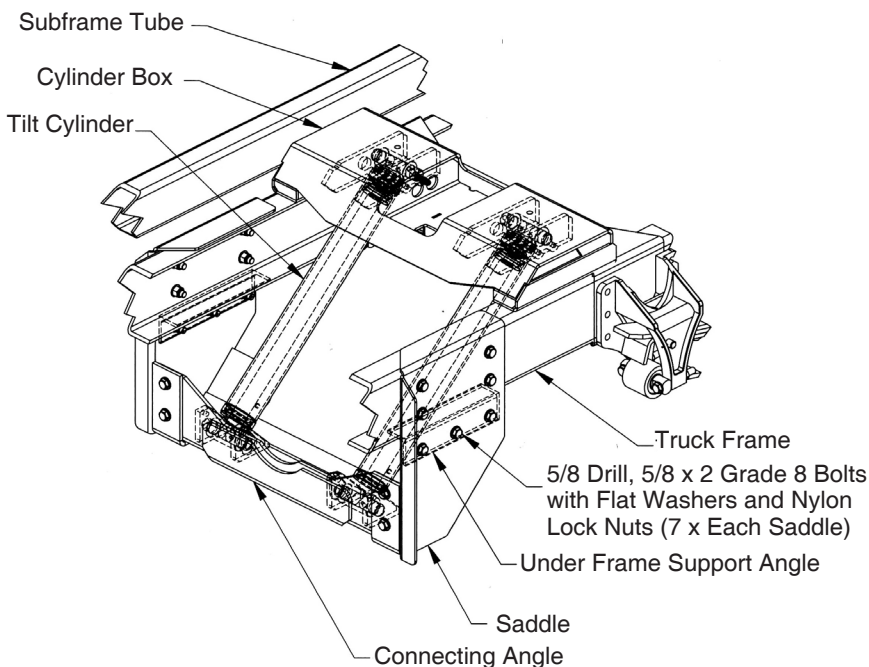
Attach and route the tilt cylinder hoses as shown. The hoses should travel in a gradual curve parallel to each other. Use rubberized clamps to fasten the hoses on the bottom of the mounting plate.





## Section VI - INSTALLATION

### INBOARD TILT CYLINDERS OUTBOARD SADDLES



Pin the base of the tilt cylinder in the cylinder box as shown.

Temporarily clamp the saddles to the truck frame and bolt the connecting angle to the saddles with 5/8 x 2 bolts, flat washers and lock nuts six places.

Unclamp the saddles and pin the rod end of the tilt cylinders into the connecting angle. Use 1.230 x 5-3/4 grooved keeper pins and 3/8 x 1-1/2 bolts with nylon lock nuts.

Completely retract the tilt cylinders and clamp the saddles tight to the top frame flange. Scribe a line onto the truck frame along the back of the saddles. Unclamp the saddles and reposition them forward 1/8 inch from the scribed line. This saddle repositioning will cause the tilt cylinders to extend 1/8 inch so that the cylinders can be hydraulically pre-loaded to remove excess pin clearance that can cause the subframe to rattle against the truck frame. Reclamp the saddles and drill four 5/8 saddle holes through each frame rail. On Japanese frames that use a series of close proximity holes, back drill the saddles using the existing holes in the truck frame. Bolt the saddles to the frame with 5/8 x 2 bolts with flat washers and nylon lock nuts.

Clamp the under-frame support angle tight to the bottom frame flange and saddle as shown. Drill three bottom row 5/8 holes in the saddles through the support angle. Fasten the support angles to the saddles with 5/8 x 2 bolts and nylon lock nuts.

## Section VI - INSTALLATION

### TOOLBOX INSTALLATION

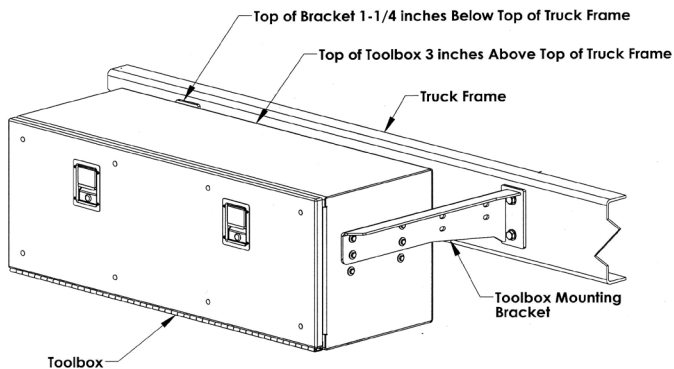
Fasten the toolbox mounting brackets to the toolbox with  $\frac{3}{8}$  x  $1\frac{1}{2}$  grade 5 bolts, flat washers, and nylon lock nuts through the top and middle holes as shown. Make sure that the mounting brackets are parallel with the top of the toolbox.



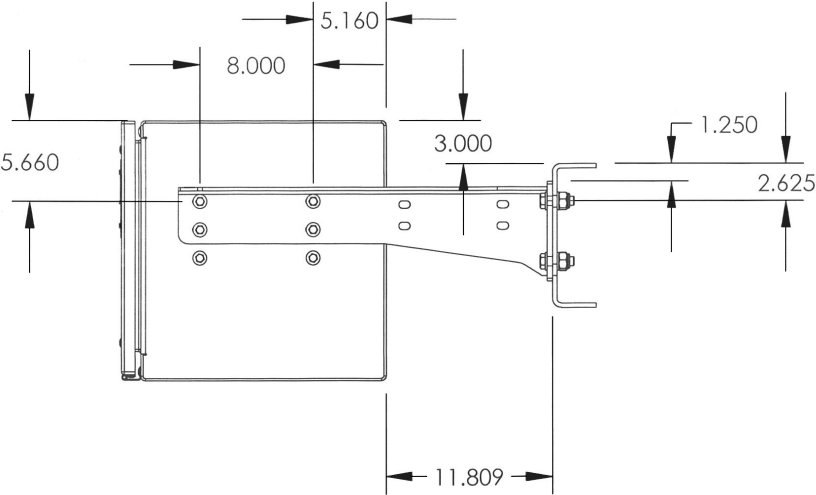
Position the toolbox mounting brackets 1 to  $1\frac{1}{4}$  inches below the top of the truck frame and scribe the mounting holes onto the truck frame. The center of the holes should be at least  $2\frac{1}{4}$  inches away from the frame flanges. Remove the box and drill  $\frac{21}{32}$  holes through the truck frame. **WARNING:** If toolboxes or toolbox mounting brackets are being used other than what is specifically shown here, make sure the mounting bracket holes drilled into the frame are no closer than  $2\frac{1}{4}$  inches away from the frame flanges. Holes that are drilled too close to the frame flanges pose a potential risk for frame damage over time.

Bolt the toolbox to the truck frame with  $\frac{5}{8}$  x 2 grade 5 bolts and nylon lock nuts.

For tandem toolbox installations, use optional spacer channel PN 37760 between the boxes on the same mounting bracket. Use four  $\frac{3}{8}$  x  $3\frac{1}{2}$  grade 5 bolts, flat washers and nylon lock nuts.



**Section VI - INSTALLATION**  
**CONVENTIONAL CARRIER TOOLBOX MOUNTING**



## Section VI - INSTALLATION

### MUDFLAPS



Install mudflap brackets to the ends of the hinge angle with 3/8 x 1-1/2 grade 5 bolts, flat washers, and nylon lock nuts as shown.

Fasten the mudflaps to the mudflap brackets with 5/16 x 1-1/4 grade 5 bolts, flat washers and nylon lock nuts.





## Section VI - INSTALLATION

### PRESSURE AND RETURN LINE HOSE ROUTING



The driver's side frame rail is typically congested with the chassis builder's hoses and wires. Therefore, the pressure and return line hoses should be routed along the passenger side frame rail. Fasten the hoses as shown with rubberized hose clamps. Take care to prevent the hoses from contacting metal edges.



## Section VI - INSTALLATION

### BED INSTALLATION



Using a paint brush, apply grease to the full length of the subframe rails on the top and sides.

Lift the body and slide it onto the subframe to within 6 feet of the front of the subframe. Extend the slideback cylinder and pin it to the body at the cylinder mount. Do not extend the slideback cylinder more than 6 feet with the cylinder rod unsupported. A slideback cylinder that is substantially extended with the rod unsupported puts extreme stress on the internal seals and degrades the life of the cylinder.

## Section VI - INSTALLATION

### LOOP HARNESS



The loop harness cable electrically joins the junction box in the subframe to the junction box in the bed. The loop harness is routed through a flexible track shown above. The track is bolted to the front end of the subframe tray. Route the loop harness through the underbody conduit tube to the front of the bed for connection to the junction box. Fasten the Igus track mounting bracket to its mounting holes under the bed with #10 - 24 x 2 socket head cap screws and nylon lock nuts provided.



## Section VI - INSTALLATION

### WINCH HOSES



The winch hoses are joined to the subframe at one end by means of a pair of bulkhead fittings, and to the underbody fluid tubes at the other end. The winch hoses when laid flat should reach 21-1/2 inches past the subframe hose tray or 2-3/4 inches past the Igus track.

Connect and tighten the winch hoses to the underbody fluid tubes.

Fasten the Igus track mounting bracket to its mounting holes under the bed. Using #10 - 24 x 2 socket head cap screws and nylon lock nuts provided.

Attach the cable to the winch drum. If the winch is an upright design, under-wind the cable so that the cable is tangent to the bottom of the drum barrel near the bed surface. Never over-wind a cable on an upright winch. The additional torque applied to an upright winch with an over-wound cable can cause the winch to break loose from the bed.



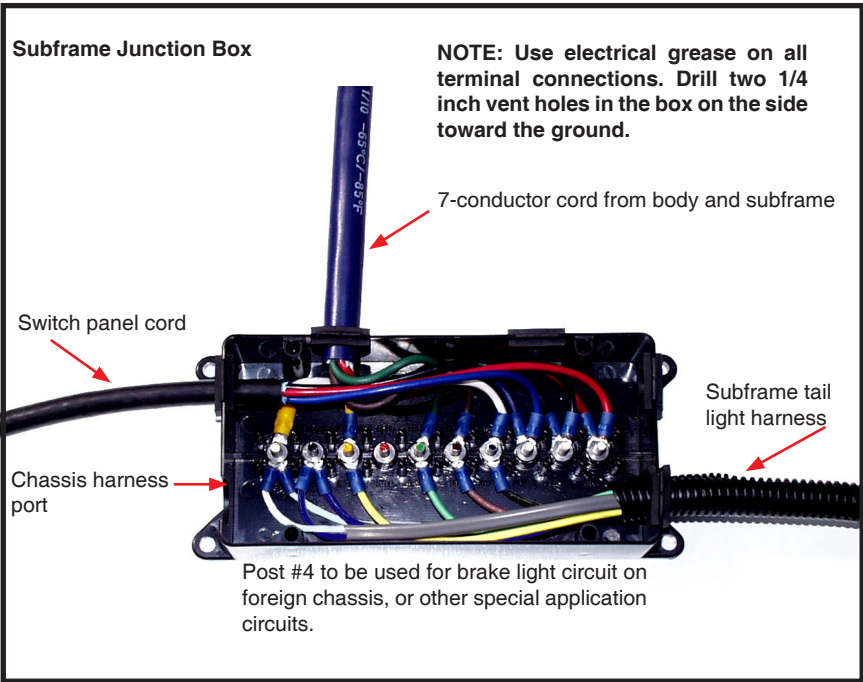
Section VI - INSTALLATION

SUBFRAME WIRING (AMERICAN TRUCKS)

COMBINED BRAKE AND TURN SIGNALS

Refer to the wire chart when making electrical connections in the junction boxes.

|                    | POST# | FUNCTION          | SUBFRAME HARNESS WIRE COLOR/GAUGE | BAR LIGHT CORD WIRE COLOR/GAUGE |
|--------------------|-------|-------------------|-----------------------------------|---------------------------------|
| CHASSIS CIRCUITS   | 1     | Ground            | White 12                          | White 10                        |
|                    | 2     | Back-Up           | Blue 14                           | N/A                             |
|                    | 3     | Left Turn/Brake   | Yellow + (Yellow Stripe) 14       | Yellow 12                       |
|                    | 4     | Reserved          | N/A                               | N/A                             |
|                    | 5     | Right Turn/Brake  | Green + (Green Stripe) 14         | Green 12                        |
|                    | 6     | Marker/Clearance  | Brown 14                          | Brown 12                        |
| AUXILIARY CIRCUITS | 7     | Lower Work Lights | Black 14                          | N/A                             |
|                    | 8     | Upper Work Lights | N/A                               | Blue 12                         |
|                    | 9     | Rotate Lights     | N/A                               | Black 12                        |
|                    | 10    | Flashing Lights   | N/A                               | Red 12                          |

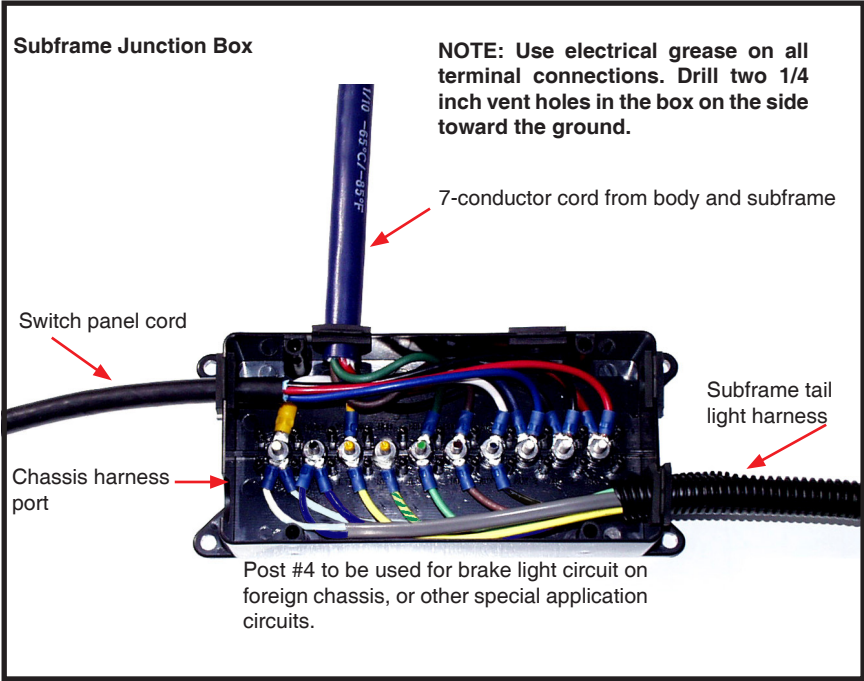


# **Section VI - INSTALLATION** **SUBFRAME WIRING (FOREIGN TRUCKS)**

## **INDEPENDENT BRAKE AND TURN SIGNALS**

Refer to the wire chart when making electrical connections in the junction boxes.

|                    | POST# | FUNCTION          | SUBFRAME HARNESS WIRE COLOR/GAUGE     | BAR LIGHT CORD WIRE COLOR/GAUGE |
|--------------------|-------|-------------------|---------------------------------------|---------------------------------|
| CHASSIS CIRCUITS   | 1     | Ground            | White 12                              | White 10                        |
|                    | 2     | Back-Up           | Blue 14                               | N/A                             |
|                    | 3     | Left Turn         | Yellow 14                             | Yellow 12                       |
|                    | 4     | Independent Brake | Yellow Stripe 14 +<br>Green Stripe 14 |                                 |
|                    | 5     | Right Turn        | Green 14                              | Green 12                        |
|                    | 6     | Marker/Clearance  | Brown 14                              | Brown 12                        |
| AUXILIARY CIRCUITS | 7     | Lower Work Lights | Black 14                              | N/A                             |
|                    | 8     | Upper Work Lights | N/A                                   | Blue 12                         |
|                    | 9     | Rotate Lights     | N/A                                   | Black 12                        |
|                    | 10    | Flashing Lights   | N/A                                   | Red 12                          |



## Section VI - INSTALLATION

### WINCH FREE-SPOOL EXTENSION HANDLE INSTALLATION



**NOTE:** Dual Free-Spool control rods must be mounted to the bed in a straight line.

## **Section VI - INSTALLATION**

### **WINCH FREE-SPOOL EXTENSION HANDLE INSTALLATION (cont'd)**

For manual shift winches, refer to the appropriate winch exploded diagram in the parts section of this book to show how the free-spool extension handles assemble to the winch and bed. Make sure that the rod support brackets are bolted straight and parallel to the front of the bed. In the case of dual free-spool control rods on worm gear winches make sure the rod support brackets mounted to the bed are done in a way that positions the driver side and passenger side rods in a straight line. Always make sure the free-spool rods are not in a bind with the rod support brackets and that they operate freely so that the spring-loaded clutch inside the winch can properly engage the winch drum.

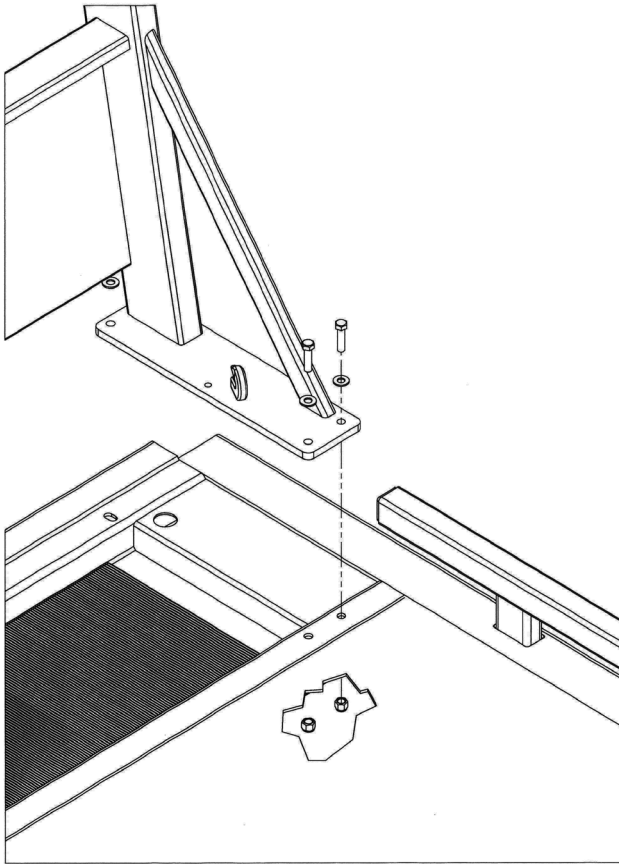
#### **WARNING**

Free-spool rods that do not operate freely in their support brackets can contribute to partial engagement of the winch clutch instead of full engagement which may enable the winch to release its load.

## Section VI - INSTALLATION

### FINAL MOUNTING

- (a) Install light mounting bar to carrier bed as shown in Figure 7.17.



**FIGURE 7.17**

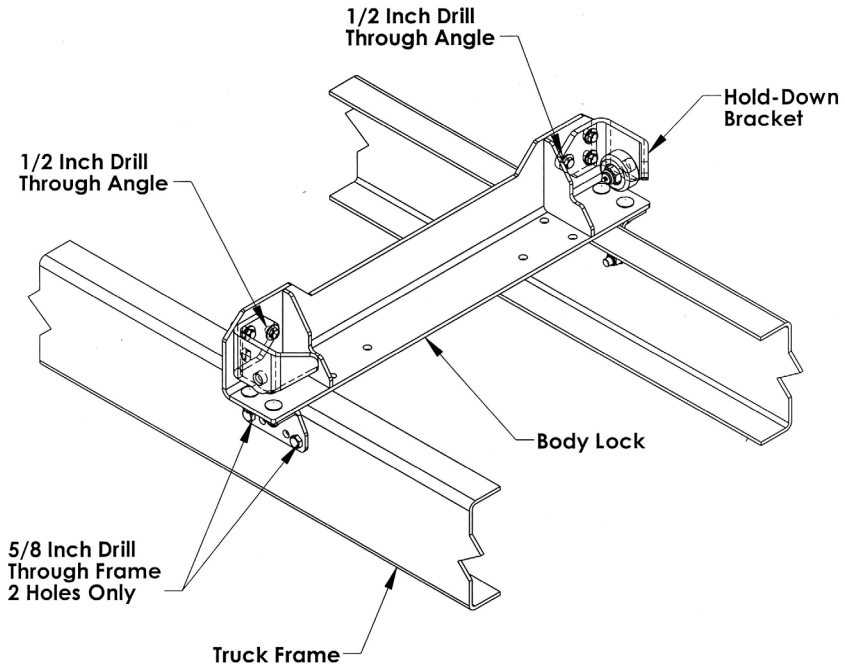
### ELECTRICAL CONNECTIONS

Refer to Electrical Schematic,

- (a) Wire up light bar.
- (b) Wire up clearance lights.
- (c) Wire up PTO switch and control panel illuminator lights.

## Section VI - INSTALLATION

### BODY LOCK



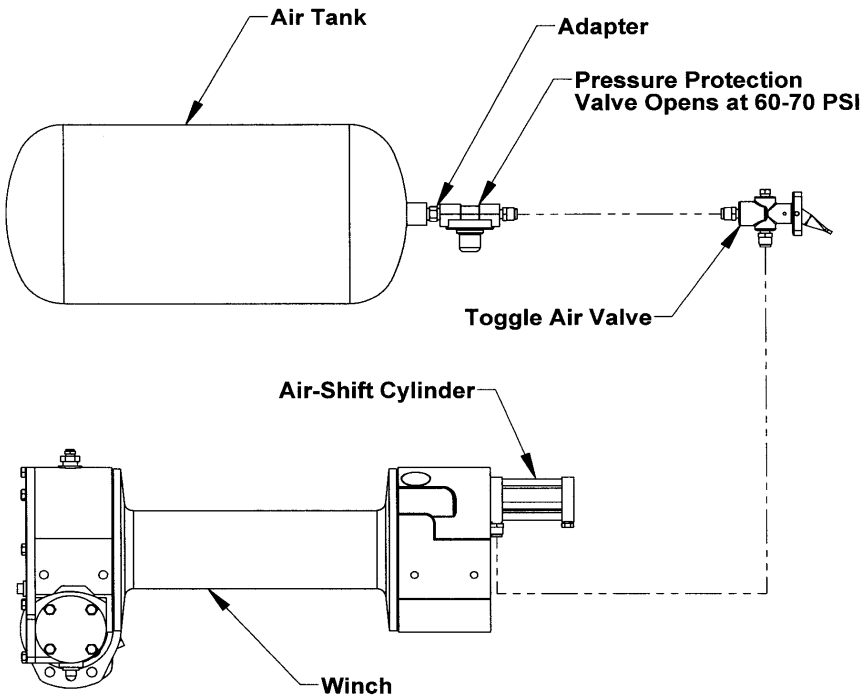
Position the body lock on the truck frame near the back of the cab. Slide the body fully forward and re-adjust the body lock so that there is 1/2 inch gap between the vertical faces of the body lock and the body sill channels. The body lock should also be centered on the truck frame and between the sill channels.

Clamp the body lock to the top flange of the truck frame. Bolt the body lock mounting brackets to the body lock angle with 5/8 carriage bolts. Drill two 5/8 holes for each bracket into the truck frame. Use one hole on each side of center of the mounting bracket. Fasten the body lock to the truck frame with 5/8 x 2 grade 5 bolts and nylon lock nuts.

Adjust the height of the hold-down brackets so that the wheels pull the body down 1/8 inch. The hold-down brackets have 2 slotted holes to allow vertical adjustment. Tighten the bolts in the slotted holes. Drill the third hole in each hold-down bracket 1/2 inch diameter and fasten with 1/2 x 2 grade 5 bolts and nylon lock nuts. This third drilled hole will lock each hold-down bracket from moving along the slotted holes.

## Section VI - INSTALLATION

### AIR-SHIFT WINCH AIR LINE



Make sure the chassis is equipped with an air dryer for better air system performance.

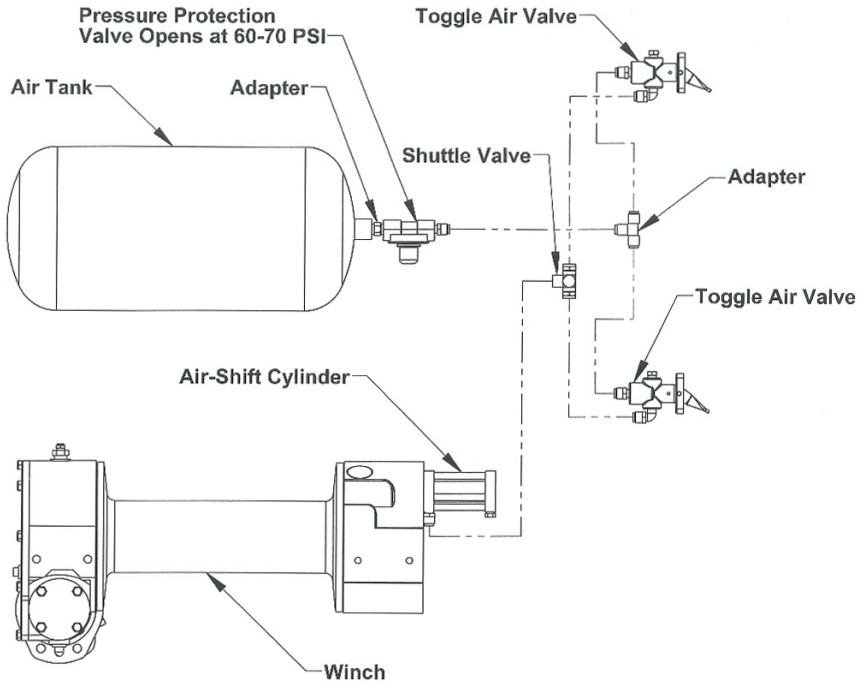
Install an air pressure protection valve directly to the air tank with an adapter. Do not use a hose or steel tubing between the tank and the pressure protection valve. The air pressure protection valve opens when the air tank pressure exceeds 60 PSI. This valve preserves pressure of at least 60 PSI in the tank in the event of an air leak between the tank and the air-shift cylinder. Make sure the air-flow directional arrows on the air pressure protection valve point out of the tank.

When installing nylon tubing between the valves and air cylinder, avoid sharp angle bends and sharp edges.

**NOTE: Toggle Air Valve Part No.: 71716**

## Section VI - INSTALLATION

### DUAL AIR-SHIFT WINCH AIR LINE



Make sure the chassis is equipped with an air dryer for better air system performance.

Install an air pressure protection valve directly to the air tank with an adapter. Do not use a hose or steel tubing between the tank and the pressure protection valve. The air pressure protection valve opens when the air tank pressure exceeds 60 PSI. This valve preserves pressure of at least 60 PSI in the tank in the event of an air leak between the tank and the air-shift cylinder. Make sure the air-flow directional arrows on the air pressure protection valve point out of the tank.

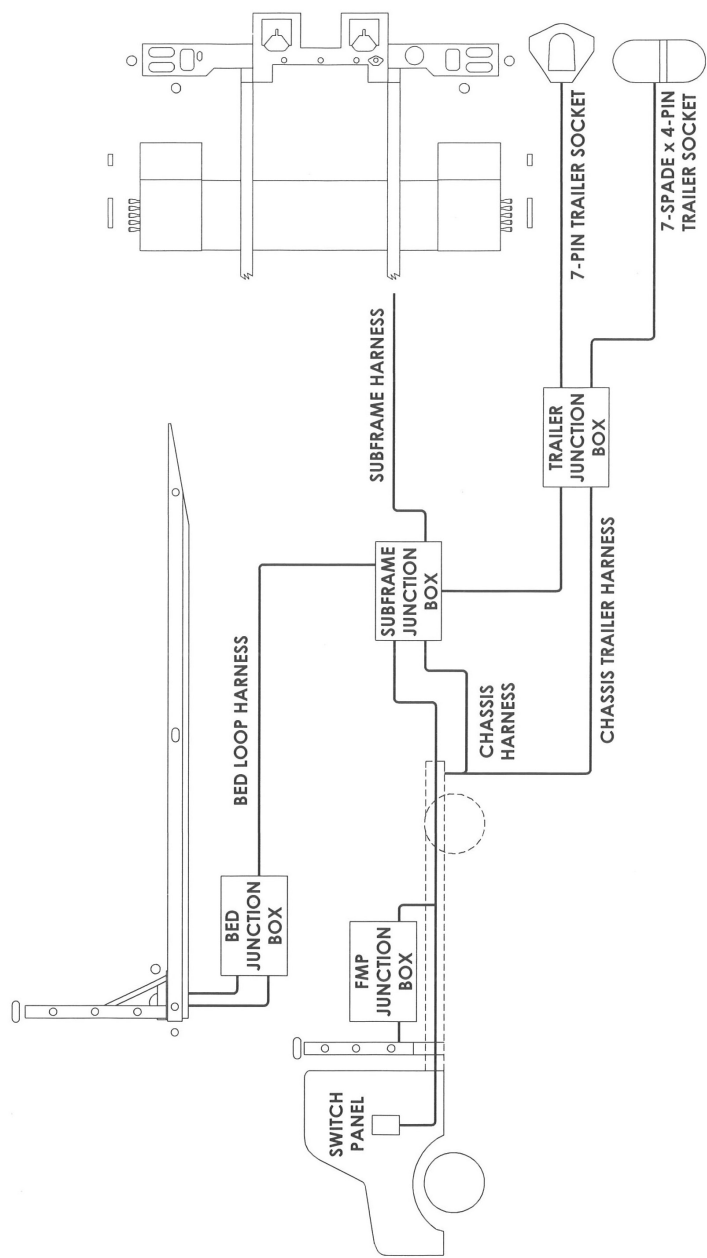
When installing nylon tubing between the valves and air cylinder, avoid sharp angle bends and sharp edges.

**NOTE: Shuttle Valve Part No.: 71717**  
**Toggle Air Valve Part No.: 71716**



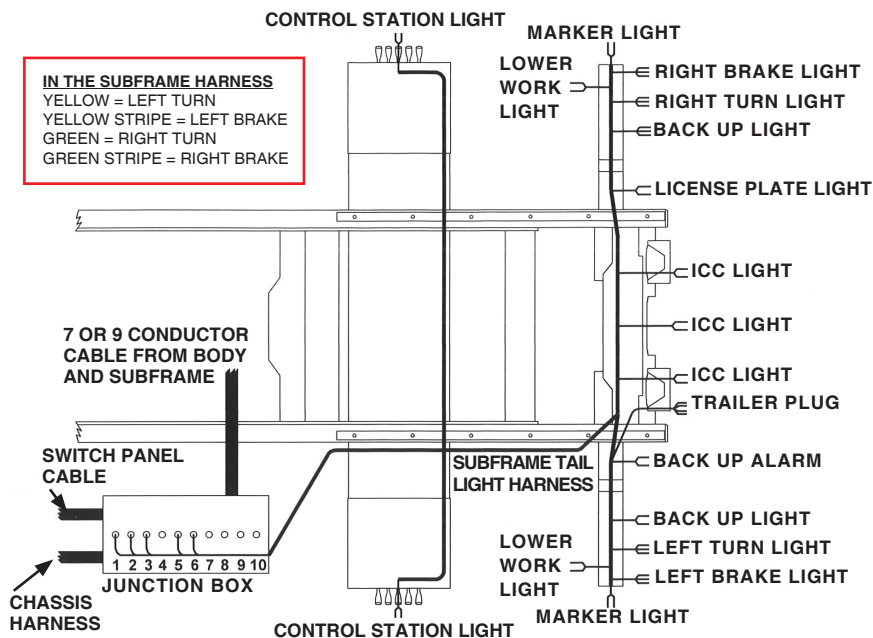
Section VII - SCHEMATICS

GENERAL CARRIER WIRE DIAGRAM



Section VII - SCHEMATICS

SUBFRAME WIRING



AMERICAN SYSTEM COMBINED BRAKE & TURN SIGNALS

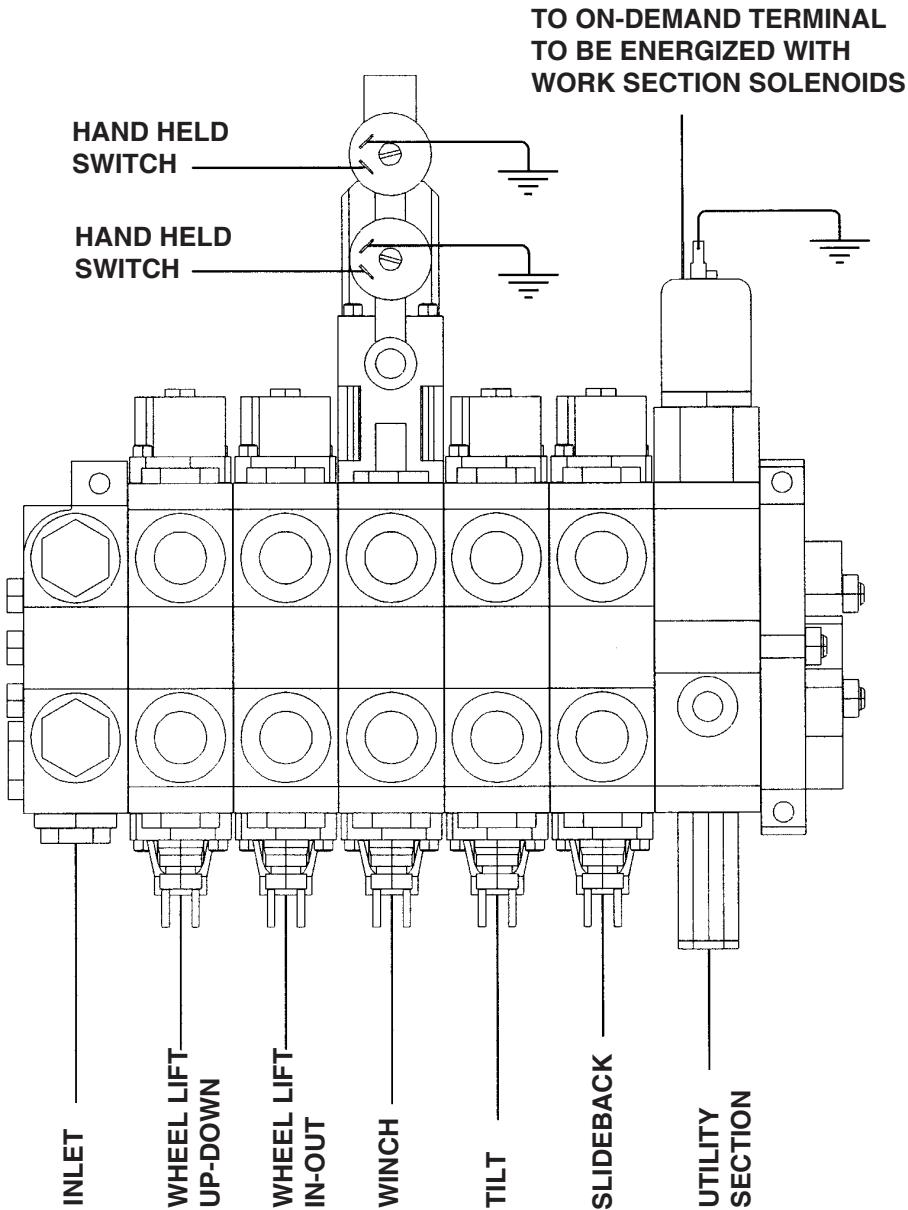
|                    | POST# | FUNCTION          | SUBFRAME HARNESS WIRE COLOR/GAUGE | BAR LIGHT CORD WIRE COLOR/GAUGE |
|--------------------|-------|-------------------|-----------------------------------|---------------------------------|
| CHASSIS CIRCUITS   | 1     | Ground            | White 12                          | White 10                        |
|                    | 2     | Back-Up           | Blue 14                           | N/A                             |
|                    | 3     | Left Turn/Brake   | Yellow + (Yellow Stripe) 14       | Yellow 12                       |
|                    | 4     | Reserved          | N/A                               | N/A                             |
|                    | 5     | Right Turn/Brake  | Green + (Green Stripe) 14         | Green 12                        |
|                    | 6     | Marker/Clearance  | Brown 14                          | Brown 12                        |
| AUXILIARY CIRCUITS | 7     | Lower Work Lights | Black 14                          | N/A                             |
|                    | 8     | Upper Work Lights | N/A                               | Blue 12                         |
|                    | 9     | Rotate Lights     | N/A                               | Black 12                        |
|                    | 10    | Flashing Lights   | N/A                               | Red 12                          |

FOREIGN SYSTEM INDEPENDENT BRAKE & TURN SIGNALS

|                    | POST# | FUNCTION          | SUBFRAME HARNESS WIRE COLOR/GAUGE  | BAR LIGHT CORD WIRE COLOR/GAUGE |
|--------------------|-------|-------------------|------------------------------------|---------------------------------|
| CHASSIS CIRCUITS   | 1     | Ground            | White 12                           | White 10                        |
|                    | 2     | Back-Up           | Blue 14                            | N/A                             |
|                    | 3     | Left Turn         | Yellow 14                          | Yellow 12                       |
|                    | 4     | Independent Brake | Yellow Stripe 14 + Green Stripe 14 |                                 |
|                    | 5     | Right Turn        | Green 14                           | Green 12                        |
|                    | 6     | Marker/Clearance  | Brown 14                           | Brown 12                        |
| AUXILIARY CIRCUITS | 7     | Lower Work Lights | Black 14                           | N/A                             |
|                    | 8     | Upper Work Lights | N/A                                | Blue 12                         |
|                    | 9     | Rotate Lights     | N/A                                | Black 12                        |
|                    | 10    | Flashing Lights   | N/A                                | Red 12                          |

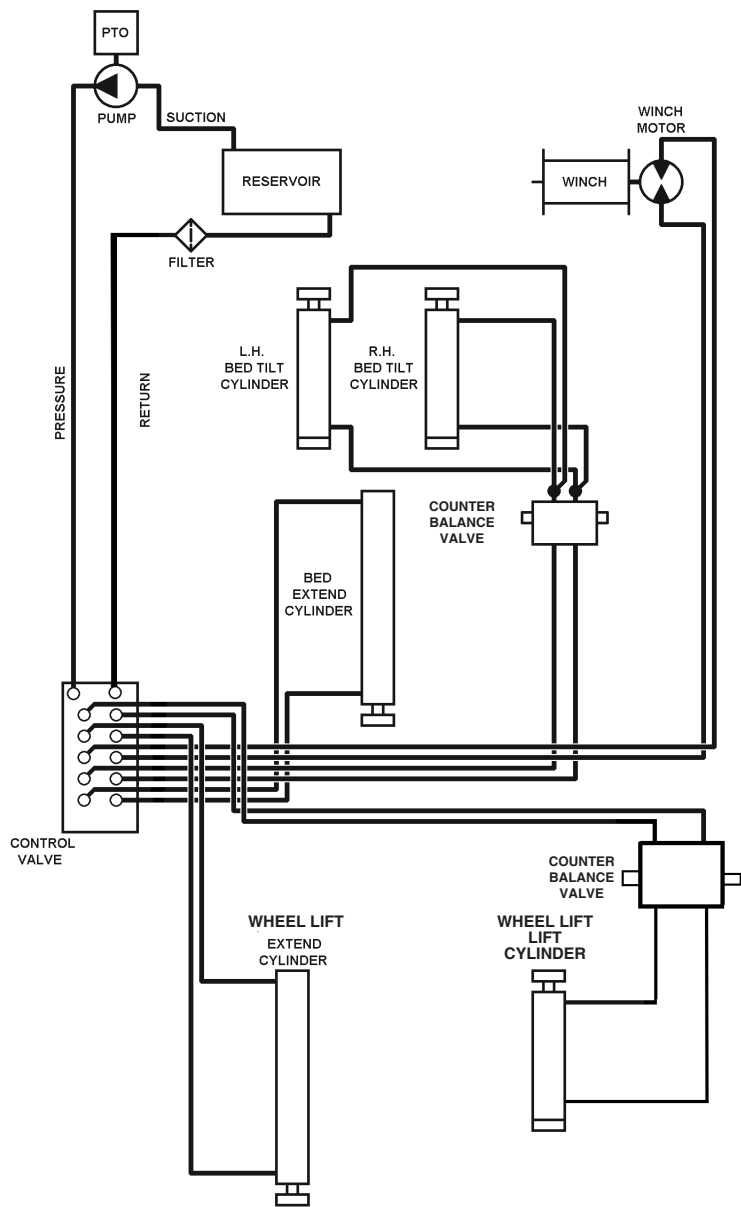
**Section VII - SCHEMATICS**

**CONTROL VALVE  
REMOTE CONTROL WINCH  
WIRE DIAGRAM**

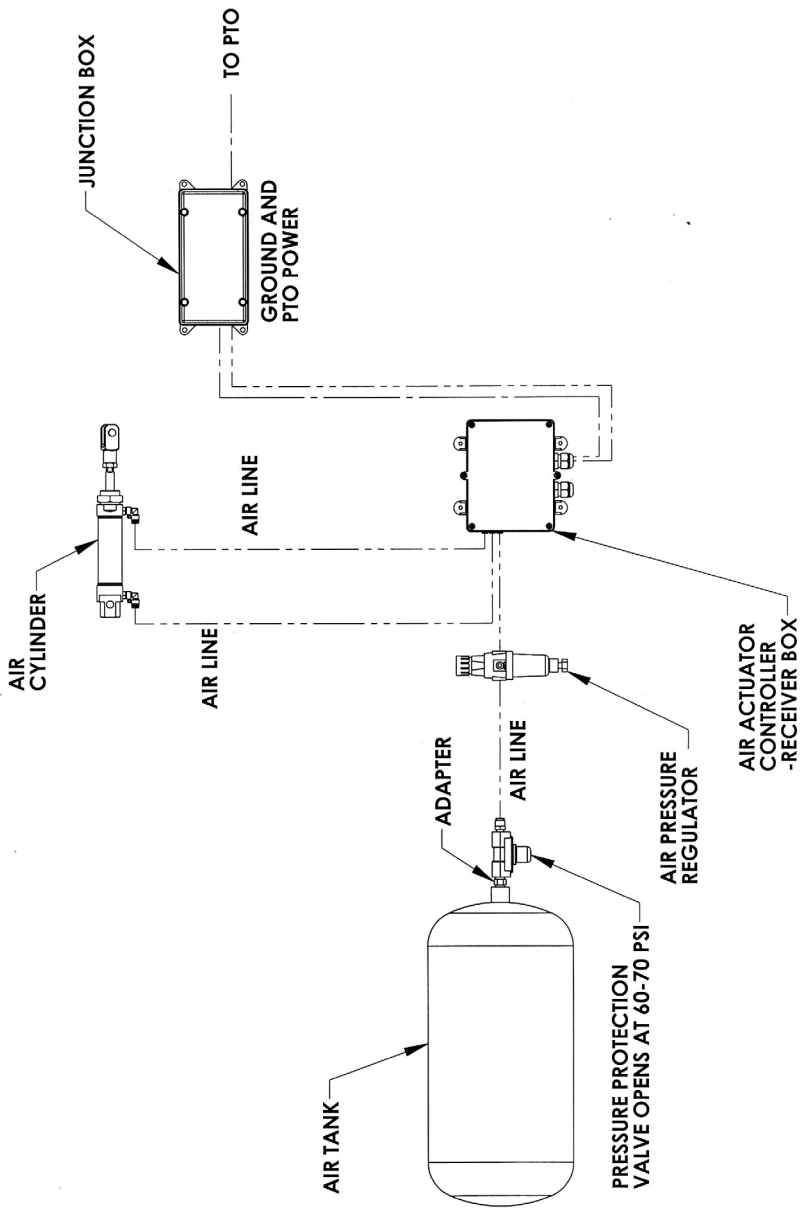


Section VII - SCHEMATICS

HYDRAULICS



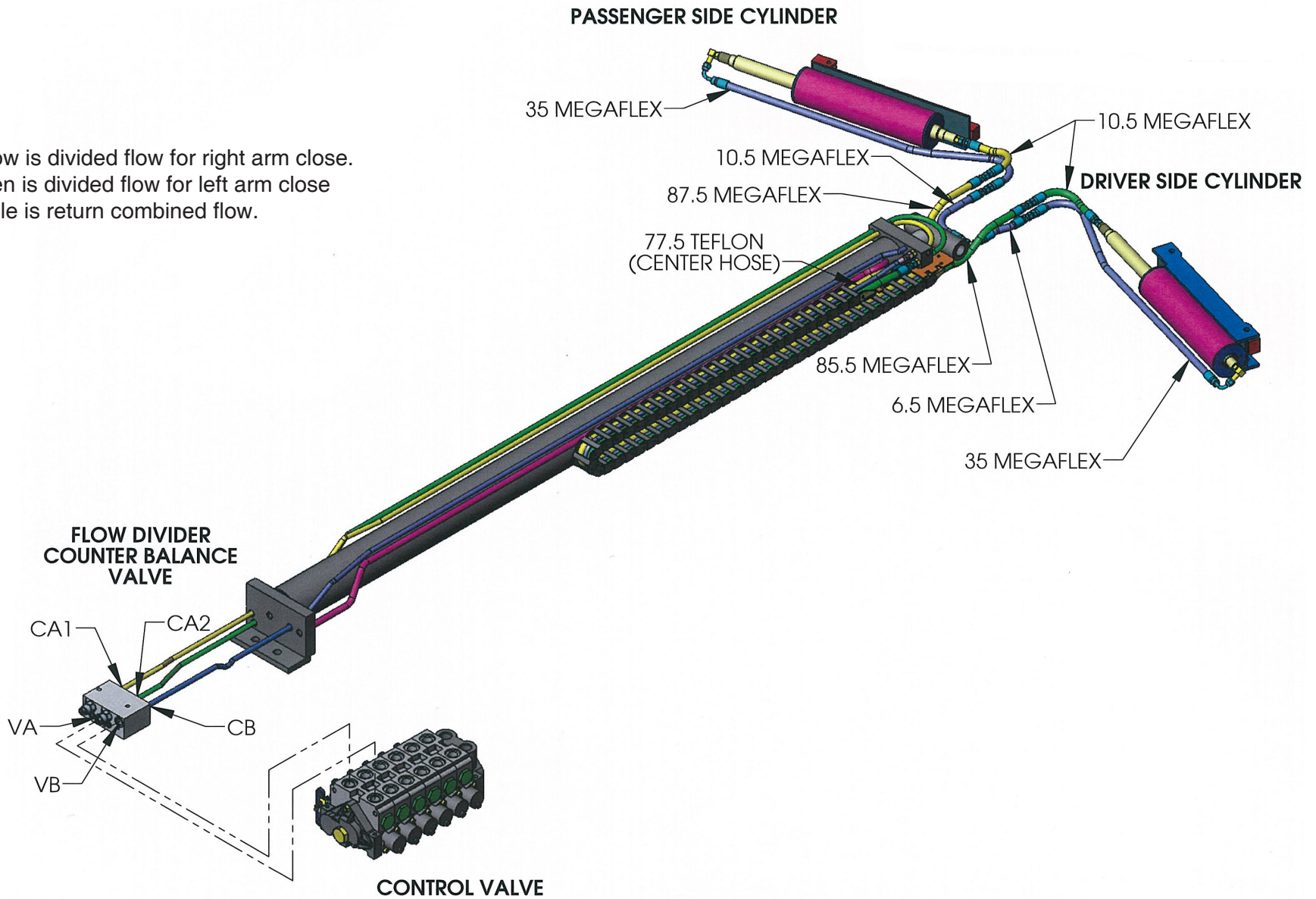
Section VII - SCHEMATIC  
WIRELESS AIR ACTUATED REMOTE  
CONTROLS



## Section VII - SCHEMATICS

### CARRIER L-ARM CYLINDER HOSE ROUTING AUTOGRIP II

Yellow is divided flow for right arm close.  
Green is divided flow for left arm close.  
Purple is return combined flow.



## Section VII - SCHEMATICS

### CARRIER L-ARM CYLINDER HOSE ROUTING AUTOGRIP II

