HR1000 SERIES A
UNIVERSAL HY-RAIL®
GUIDE WHEEL EQUIPMENT
MANUALLY OPERATED

OPERATOR'S SERVICE AND PARTS MANUAL

ISSUED 8 - 2000 BULLETIN 1066B

■ **THIS MANUAL CONTAINS VITAL INFORMATION FOR THE SAFE USE AND EFFICIENT OPERATION OF THE VEHICLE EQUIPPED WITH HY-RAIL® GUIDE WHEEL EQUIPMENT. CAREFULLY READ THIS OPERATOR'S MANUAL BEFORE USING THE VEHICLE. FAILURE TO ADHERE TO THE INSTRUCTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.**

When this manual is received, record the rail pilot unit serial numbers in the spaces provided in the General Information and Parts Sections for future reference, in case the serial number tags ever become unreadable. A Manual must remain with the vehicle. Additional or replacement manuals may be obtained by calling or writing Harsco Track Technologies, Harsco Corporation.

All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. Harsco Track Technologies, Harsco Corporation reserves the right to make changes at any time without notice.

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SECTION 1 - GENERAL INFORMATION
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Safety Information

THIS SYMBOL MEANS: ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.

SAFETY IS A CRITICAL FACTOR IN THE DESIGN OF HARSCO TRACK TECHNOLOGIES EQUIPMENT. THE BEST SAFETY PROGRAM STARTS WITH A SAFETY CONSCIOUS OPERATOR. THE SAFETY INFORMATION HIGHLIGHTED IN THIS BULLETIN DESCRIBES SAFE OPERATING PRACTICES FOR THE BENEFIT OF THE WORKERS WHO WILL USE OUR EQUIPMENT IN THEIR DAILY JOBS.

HAZARD SERIOUSNESS

Signal Words: **DANGER**, **WARNING** and **CAUTION** are used to identify levels of hazard seriousness.

DANGER - Immediate hazards which WILL result in sever bodily injury or death.

WARNING - Hazards or unsafe practices which COULD result in severe bodily injury or death.

CAUTION - Hazards or unsafe practices which COULD result in minor bodily injury and / or product or property damage.

Safety Information

- **APPLY THE VEHICLE PARKING BRAKE AND STOP THE ENGINE WHEN PERFORMING MAINTENANCE, MAKING ADJUSTMENTS, WORKING UNDER VEHICLE OR GUIDE WHEEL EQUIPMENT OR WHENEVER UNINTENDED MOVEMENT OF THE VEHICLE COULD OCCUR, UNLESS OTHERWISE INSTRUCTED IN THIS MANUAL.**

- **MAKE SURE ALL PERSONS ARE CLEAR OF VEHICLE BEFORE PERFORMING ANY OPERATING FUNCTIONS.**

- **KEEP ALL PARTS OF THE BODY AND LOOSE CLOTHING CLEAR OF ALL MOVING PARTS OF THE VEHICLE OR GUIDE WHEEL EQUIPMENT.**

- **UNDERSTAND EQUIPMENT OPERATION AND BE AWARE OF ALL PINCH POINTS BEFORE OPERATING OR MAKING ADJUSTMENTS TO GUIDE WHEEL EQUIPMENT.**

- **IF A DERAILMENT SHOULD OCCUR WHILE VEHICLE IS OPERATING IN ELECTRIFIED 3RD-RAIL TERRITORY, VEHICLE OR GUIDE WHEEL EQUIPMENT MIGHT BE IN ELECTRICAL CONTACT WITH ELECTRIFIED RAIL. DO NOT ATTEMPT TO EXIT FROM VEHICLE UNTIL ELECTRICAL POWER TO 3RD-RAIL HAS BEEN TURNED OFF.**

- **DO NOT EXCEED 45 MPH (72 km/h) WHEN OPERATING VEHICLE ON TRACK. RAILROAD RULES GOVERNING SPEEDS SHOULD BE OBSERVED AT ALL TIMES. REDUCE SPEED WHEN PROPELLING VEHICLE THROUGH SWITCHES, CROSSINGS, BRANCH LINES AND ANY SPECIAL TRACK WORKS. OPERATING VEHICLE AT UNSAFE SPEEDS COULD RESULT IN DERAILMENT OF VEHICLE.**

- **CHECK AND CORRECT GUIDE WHEEL EQUIPMENT ALIGNMENT PROMPTLY IF MISALIGNMENT IS INDICATED.**

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Safety Information

- **AT MAXIMUM LOADED GROSS VEHICLE WEIGHT ON TRACK (including driver, passengers, equipment, tools, payload, etc.) DO NOT EXCEED ANY OF THE FOLLOWING:**
  - **VEHICLE'S G.V.W.R. (Gross Vehicle Weight Rating).**
  - **VEHICLE'S FRONT G.A.W.R. (Gross Axle Weight Rating) OR THE SUM OF THE FRONT RAIL PILOT UNIT RATED LOAD CAPACITY PLUS (+) VEHICLE'S FRONT TIRE/WHEEL RATED LOAD CAPACITY, WHICHEVER IS LOWER.**
  - **VEHICLE'S REAR G.A.W.R. (Gross Axle Weight Rating) OR THE SUM OF REAR RAIL PILOT UNIT GUIDE WHEEL RATED LOAD CAPACITY PLUS (+) VEHICLE'S REAR TIRE/WHEEL RATED LOAD CAPACITY, WHICHEVER IS LOWER.**
  - **COMPONENTS RATED LOAD CAPACITY:**
    - **A. TIRE MANUFACTURER'S RATED LOAD CAPACITY**
    - **B. VEHICLE'S WHEEL RATED LOAD CAPACITY**
    - **C. RAIL PILOT UNIT RATED LOAD CAPACITY (700 lbs (318 kg) maximum per guide wheel)**

FAILURE TO HEED THESE WARNINGS COULD RESULT IN SEVERE BODILY INJURY.

- **OBSERVE AND FOLLOW ALL RAILROAD SAFETY RULES AND REGULATIONS.**
- **KNOW THE POSITIONS AND FUNCTIONS OF ALL CONTROLS BEFORE ATTEMPTING TO OPERATE VEHICLE.**
- **THIS GUIDE WHEEL EQUIPMENT IS DESIGNED WITH YOUR SAFETY IN MIND. NEVER DISCONNECT AND/OR ATTEMPT TO OVERRIDE SAFETY FEATURES.**
- **SUPPLIED HAND LEVERS ARE DESIGNED FOR OPERATING ONLY PROPERLY MAINTAINED GUIDE WHEEL EQUIPMENT. DO NOT USE THE HAND LEVER FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS DESIGNED. IF HAND LEVER IS DAMAGED (BENT, BROKEN, ETC.), IT MUST NOT BE REPAIRED (STRAIGHTENED, WELDED, ETC.), IT MUST BE REPLACED.**

FAILURE TO HEED THESE PRECAUTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.

Note: To help ensure safe operation of this equipment, keep all safety decals clean and legible. Replace safety decals when necessary with new decals, listed in the Parts Section of this manual.

Identification View

FIGURE 1-1
HR1000 SERIES A HY-RAIL® EQUIPPED VEHICLE

Description

The FAIRMONT™ HR1000 Series A HY-RAIL® guide wheel equipment can be applied to various down sized and standard utility vehicles, cab chassis and pickup trucks. The vehicles G.V.W.R. (gross vehicle weight rating) and/or G.A.W.R. (gross axle weight rating) must comply with the specified limits listed in the Harsco Track Technologies Vehicle Specifications Manual.

The HY-RAIL® guide wheel equipment has front and rear rail pilot units which are manually operated and are mounted onto the vehicle frame. All weight of the rail pilot units is carried on the vehicle frame, above the springs, when the units are in the "highway" position. Load bearing guide wheel assemblies guide the vehicle during on track operation.

The HY-RAIL® equipped vehicle uses the vehicle propulsion and braking system for propelling and braking on track.

Vehicle Orientation

Front - rear and left - right are determined from the vehicle operator's seat.

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Serial Numbers

When this bulletin is received, complete the following record from the serial number tag on both the front and rear rail pilot units. Always provide these factory serial numbers when calling or writing about the units. The serial number tags are located on the frame mounting assembly on both units.

FIGURE 1-2
FRONT RAIL PILOT UNIT SERIAL NUMBER TAG

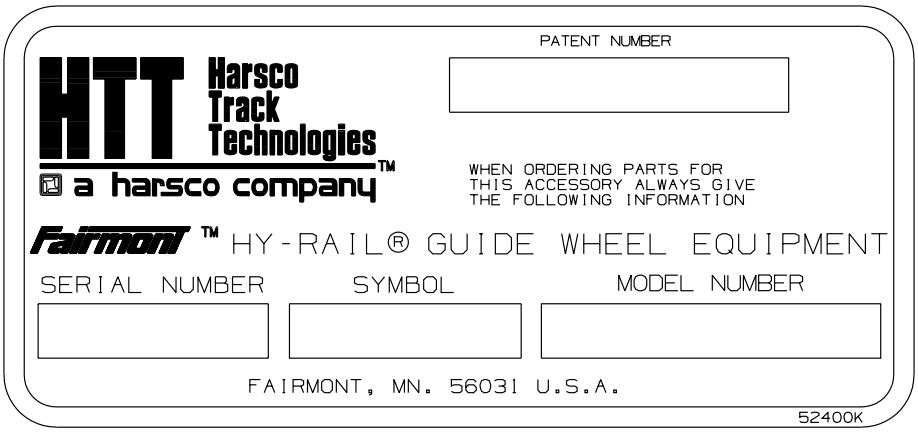
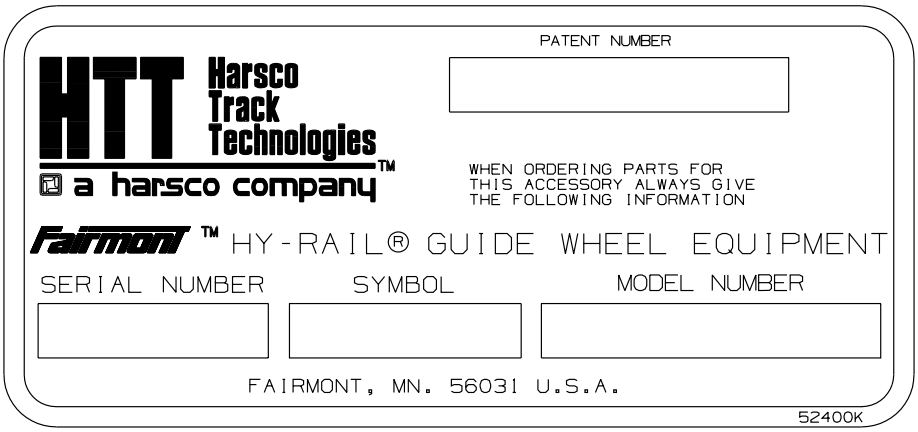


FIGURE 1-3
REAR RAIL PILOT UNIT SERIAL NUMBER TAG



Specifications

VEHICLE

See the Harsco Track Technologies HY-RAIL® Vehicle Specifications Manual for vehicle specifications. For information regarding special applications not listed in the Harsco Track Technologies Vehicle Specifications Manual, contact Harsco Track Technologies, Harsco Corporation, Fairmont, Minnesota.

RAIL PILOT UNITS

Track Gauge	56-1/2 in	(1435 mm)
Guide Wheels - All Tread Types		
- Flange Diameter	12-1/4 in	(311 mm)
- Tread Diameter	10 in	(254 mm)
Weight - Front Unit	245 lbs	(111 kg)
- Rear Unit	245 lbs	(111 kg)

Recommend Load Per Guide Wheel - All Tread Types (with vehicle at curb weight)

Full Sized Vehicles - 6,000 lbs (2,722 kg) GVWR or More		
Front Unit	400 - 450 lbs	(181 - 204 kg)
Rear Unit	350 - 400 lbs	(159 - 182 kg)
Down Sized Vehicles - 6,000 lbs (2,722 kg) GVWR or Less		
Front Unit	325 - 375 lbs	(147 - 170 kg)
Rear Unit	275 - 325 lbs	(125 - 147 kg)

Maximum Load Per Guide Wheel - All Tread Types	700 lbs	(318 kg)

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SECTION 2 - OPERATION
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Towing

Speedometer

■ **WHEN WHEEL/TIRE MODIFICATIONS ARE APPLIED, CHECK AND CHANGE SPEEDOMETER DRIVE RATIO IF NECESSARY. THE SPEEDOMETER DRIVE RATIO WILL INFLUENCE THE OPERATION OF THE VEHICLE'S ANTI-LOCK BRAKE SYSTEMS, ELECTRONICALLY CONTROLLED TRANSMISSION SHIFT TIMING AND SPEEDOMETER DISPLAY OF THE TRUE VEHICLE SPEED. FAILURE TO MAINTAIN CORRECT SPEEDOMETER DRIVE RATIO COULD RESULT IN SEVERE BODILY INJURY.**

Some vehicles require special larger diameter wheels and/or wheel spacers to properly space the vehicle tires for on track operation. Use of these wheel modifications may effect the speedometer drive ratio calibration. The speedometer drive ratio will influence the operation of the vehicle's anti-lock brake systems, electronically controlled transmission shift timing and speedometer display of the true vehicle speed. The vehicle speedometer must be re-calibrated when wheel modifications are applied to the vehicle. See the vehicle manufacturer or dealer for speedometer calibration information.

Preparing for Operation

VEHICLE

Be sure the vehicle is in operating condition by checking the following:

a. Engine oil level.
b. Radiator fluid level.
c. Fuel tank level.
d. Brakes work properly.
e. Parking brake works properly.
f. Head, brake and signal lights work properly.
g. Tires properly inflated to the manufacturer's recommended maximum pressure printed on the sidewall of the tires, or the wheel manufacturer's recommended maximum pressure stamped on the wheel, whichever is lower.
h. Vehicle wheels: Lug nuts / bolts tightened to the proper torque, inspect vehicle wheels, lug bolts and lug nuts for wear or damage. For vehicle wheel, lug bolt and lug nut inspection information refer to the USER'S GUIDE TO WHEELS AND RIMS produced by THE MAINTENANCE COUNCIL. To obtain this guide, contact:

THE MAINTENANCE COUNCIL
AMERICAN TRUCKING ASSOCIATION
2200 MILL ROAD
ALEXANDRIA, VA. 22314
Phone: (703) 838-1763

i. Any other normal maintenance requirements.

Preparing for Operation

GUIDE WHEEL EQUIPMENT

Be sure the front and rear rail pilot units are in operating condition by checking the following:

a. Overall for damaged or worn parts.
b. Proper alignment and guide wheel loads.
c. Proper lubrication at recommended operating hourly intervals.

Misalignment Indicators

■ **BEFORE OPERATING A VEHICLE WITH NEWLY INSTALLED GUIDE WHEEL EQUIPMENT ON TRACK, VERIFY THAT THE GUIDE WHEEL EQUIPMENT ALIGNMENT PROCEDURE HAS BEEN COMPLETED. CHECK AND CORRECT ALIGNMENT PROMPTLY IF MISALIGNMENT IS INDICATED. MISALIGNMENT OF GUIDE WHEEL EQUIPMENT COULD RESULT IN DERAILMENT OF THE VEHICLE AND SEVERE BODILY INJURY.**

The following conditions may indicate that minor adjustments to the guide wheel equipment alignment are necessary. If any of these conditions occur during operation, perform the Track Test, see Adjustment Section - Vehicle Track Test and/or complete the Alignment Procedure, see Adjustment Section - Guide Wheel Equipment Alignment Procedure.

1. Excessive flange or tread wear on any of the rail guide wheels.

2. The vehicle pulls noticeably to the left or right during track operation.

3. Vibration felt throughout the vehicle at various speeds during track operation.

Placing Vehicle on Track

- **PLACE VEHICLE AUTOMATIC TRANSMISSION IN "PARK" OR MANUAL TRANSMISSION IN "NEUTRAL". APPLY THE PARKING BRAKE.**

- **UNDERSTAND EQUIPMENT OPERATION AND BE AWARE OF ALL PINCH POINTS BEFORE OPERATING OR MAKING ADJUSTMENTS TO GUIDE WHEEL EQUIPMENT.**

- **BEFORE PROPELLING THE VEHICLE ON THE TRACK, MAKE SURE:**
  - **ALL FOUR GUIDE WHEELS ARE LOWERED, LOCKED IN THE RAIL POSITION, AND SECURED WITH THE LOCK PIN.**
  - **ALL GUIDE WHEEL FLANGES ARE ENGAGED ON THE INSIDE OF THE RAIL.**
  - **THE FRONT WHEELS ARE POINTED STRAIGHT AHEAD AND THE STEERING WHEEL LOCK IS ENGAGED.**

FAILURE TO HEED THESE WARNINGS COULD RESULT IN DERAILMENT OF THE VEHICLE AND SEVERE BODILY INJURY.

- **THE SUPPLIED HAND LEVERS ARE DESIGNED FOR OPERATING ONLY PROPERLY MAINTAINED GUIDE WHEEL EQUIPMENT. DO NOT USE THE HAND LEVER FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS DESIGNED. IF THE HAND LEVER IS DAMAGED (BENT, BROKEN, ETC.), IT MUST NOT BE REPAIRED (STRAIGHTENED, WELDED, ETC.), IT MUST BE REPLACED.**

- **OBSERVE AND FOLLOW ALL RAILROAD SAFETY RULES AND REGULATIONS.**

- **IF THE VEHICLE IS EQUIPPED WITH A STROBE LIGHT (BEACON) AND RAILROAD RULES AND REGULATIONS REQUIRE ITS USE, THE STROBE LIGHT (BEACON) MUST BE ILLUMINATED WHEN PLACING THE VEHICLE ON TRACK AND WHEN OPERATING THE VEHICLE ON TRACK.**

FAILURE TO HEED THESE PRECAUTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.

Placing Vehicle on Track

LOWERING GUIDE WHEELS

1. Ensure that highway vehicles are not approaching the grade crossing while placing the vehicle on track. To ensure safety, flag the crossing per railroad rules and regulations.

2. At a road crossing, drive the vehicle about 25 feet (7.6 M) past the track. Back the vehicle onto the rails so that the rear vehicle wheels are centered on rails. It may be necessary to move the vehicle back and forth several times to get the wheels centered on the rail properly.

3. Place automatic transmission in "PARK" or manual transmission in "NEUTRAL". Apply the parking brake.

4. Lower and lock the rear guide wheels first. The rear guide wheels should be lowered first so the vehicle front tires can be maneuvered to align the front guide wheels with the rails.

5. See figure 2-1. Remove lock pin (1). Button in "T" end of the pin must be pressed in to remove the lock pin. Place the lock pin in a position so that it does not become entangled in the mechanical lock mechanism.

6. Move the spring loaded lever (2) up to allow the locking mechanism to disengage.

7. Insert the white end (A) of hand lever (6) into socket (4). Push down on the hand lever to release the locking mechanism. While maintaining a firm grip on the hand lever, raise the hand lever to lower the guide wheel to the rail.

   If the locking mechanism does not release due to ice or slush build-up in the locking mechanism, pull on the "icebreaker" handle (3) while pushing down on hand lever (6). This should release the locking mechanism.

8. With the guide wheel resting on the rail, remove hand lever (6) from socket (4) and insert the yellow end (B) into socket (5). Push down on the hand lever, forcing the guide wheel down until the locking mechanism automatically engages, securing the guide wheel in the "rail" position.

9. Insert lock pin (1) to secure the locking mechanism. Button in "T" end of the pin must be pressed in to insert the lock pin. Remove hand lever (6) from socket (5).

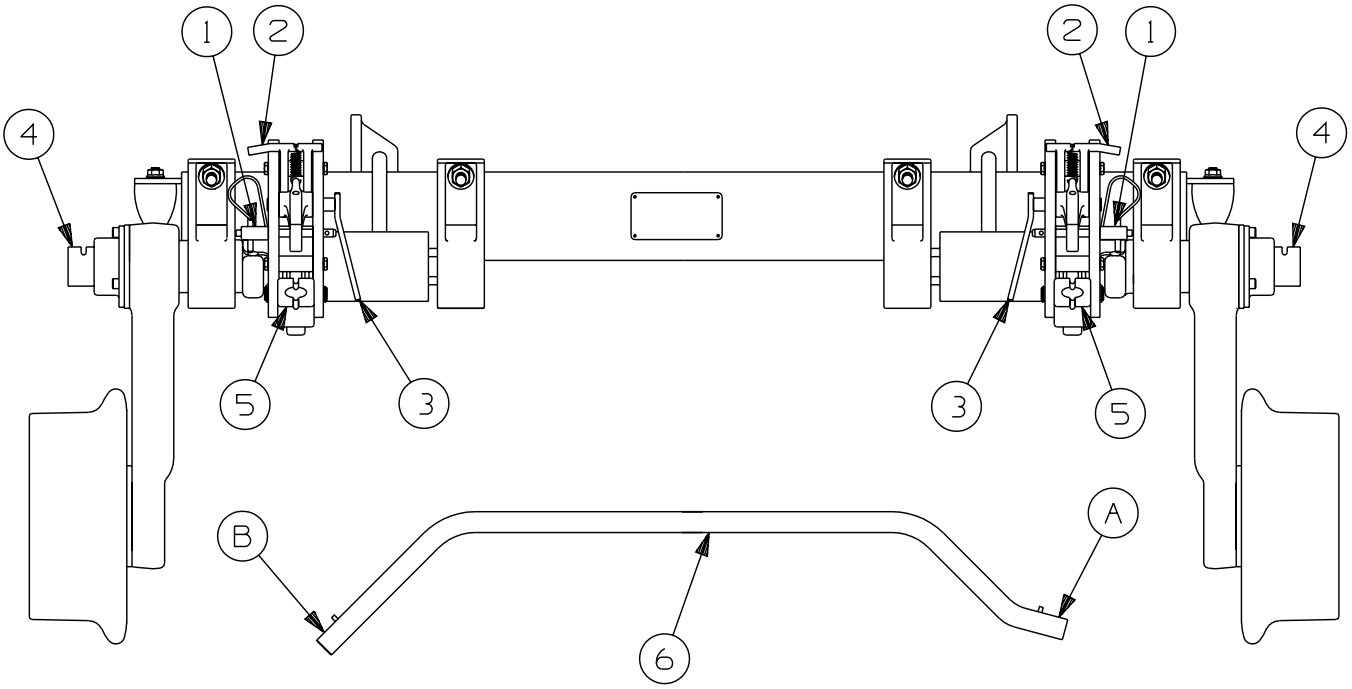
10. Repeat Steps 5 through 9 to lower and lock the other rear guide wheel in the "rail" position.

11. After the rear guide wheels are locked in the "rail" position, move the vehicle so that the vehicle front wheels are centered on the rail. Follow the same procedure to lock the front guide wheels in the "rail" position.

Placing Vehicle on Track

LOWERING GUIDE WHEELS

FIGURE 2-1
PLACING VEHICLE ON TRACK



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Placing Vehicle on Track

STEERING LOCK

12. See Figures 2-2 and 2-3. Turn the steering wheel to set the vehicle front wheels straight ahead. Secure the steering wheel in this position with the steering lock, located on the steering column. Steering locks may vary from vehicle to vehicle but will operate similarly.

    Note: Do not place any pressure on the steering wheel after the steering lock is engaged.

FIGURE 2-2
STEERING LOCK IN UNLOCKED POSITION

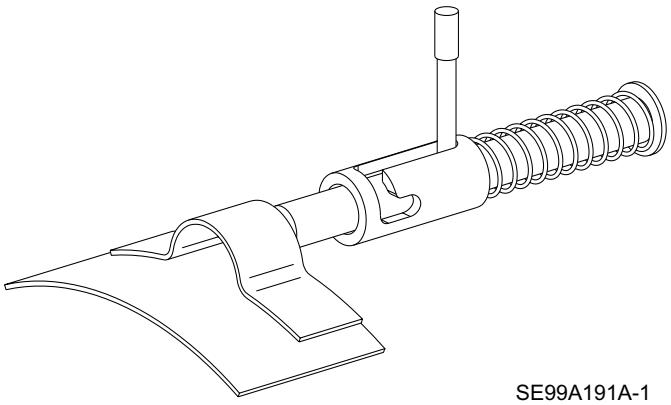

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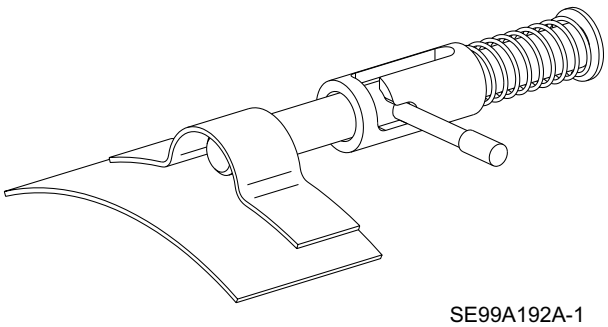
FIGURE 2-3
STEERING LOCK IN LOCKED POSITION



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RAIL SWEEPS

13. The rail pilot units may be equipped with rail sweeps. The rail sweeps are positioned ahead of the front guide wheels and behind the rear guide wheels. The rail sweeps clear the rail of debris, lengthening the service life of the guide wheels.

    The rail sweeps are attached to the wheel arm and will lower when the guide wheels are lowered to the "rail" position and will raise when the guide wheels are raised to the "highway" position.

Guide Wheel Load on Track

- **IMPROPER LOADING OF THE HY-RAIL® EQUIPPED VEHICLE CAN CAUSE DERAILMENT OF THE VEHICLE.**
- **APPLY VEHICLE PARKING BRAKE AND STOP VEHICLE ENGINE BEFORE CHECKING GUIDE WHEEL LOAD.**
- **NEVER OPERATE THE VEHICLE ON THE "RAIL" WITH ONE OR MORE OF THE OVERLOAD SET SCREWS BOTTOMED OUT.**
- **ALWAYS CHECK THE GUIDE WHEEL LOAD BEFORE OPERATING THE VEHICLE ON TRACK. MINIMUM LOAD ON ANY GUIDE WHEEL MUST BE AT LEAST 350 LBS (159 kg) FOR FULL SIZED VEHICLES OR 275 LBS (125 kg) FOR DOWN SIZED VEHICLES. MAXIMUM LOAD ON ANY GUIDE WHEEL MUST NOT EXCEED 700 LBS (318 kg). NEVER OPERATE THE VEHICLE ON TRACK IF THE LOAD ON ANY GUIDE WHEEL IS NOT WITHIN THESE RANGES.**
- **DO NOT USE ANY OTHER JACK THEN THE HARSCO TRACK TECHNOLOGIES WHEEL WEIGHING JACK NO. 073527 TO CHECK THE GUIDE WHEEL LOAD. USE OF ANY OTHER JACK WILL RESULT IN INCORRECT GUIDE WHEEL LOAD INFORMATION.**
- **MISUSE OF THE WHEEL WEIGHING JACK MAY CAUSE GAUGE TO EXPLODE. READ ANSI B40.1 AND APPARATUS INSTALLATION / OPERATING INSTRUCTIONS BEFORE USE.**
- **DO NOT USE THE WHEEL WEIGHING JACK TO LIFT THE VEHICLE. EXCESSIVE WEIGHT MAY CAUSE THE JACK TO FAIL.**

FAILURE TO HEED THESE WARNINGS COULD RESULT IN DERAILMENT OF VEHICLE AND/OR SEVERE BODILY INJURY.

Guide Wheel Load on Track

CHECKING GUIDE WHEEL LOAD

1. See Figure 2-4. Lower and lock all guide wheels in the rail position. When the vehicle is at curb weight (with permanent attachments such as: spare tire, tool box less tools, utility box, crane, aerial lift boom, etc; and without passengers, baggage, load, etc.) there should be 3/8 inch (9.5 mm) clearance between the overload set screw and the stop on the casting. Check the overload set screws on each guide wheel whenever the vehicle is loaded or additional load is added to the existing vehicle load on "rail". If any of the overload set screws are bottomed out against the stop on the casting, the load must be redistributed or some of the load removed. Never operate the vehicle on "rail" with one or more of the overload set screws bottomed out.

2. Use the wheel weighing jack (Harsco Track Technologies part no. 073527) to check the guide wheel load if any of the overload set screws are bottomed out against the stop on the casting and/or to determine the load on the guide wheel. Do not use any other jack then the Harsco Track Technologies wheel weighing jack no. 073527 to check the guide wheel load. Use of any other jack will result in incorrect guide wheel load information.

3. See Figure 2-5. Place the wheel weighing jack (073527) under the guide wheel arm directly below the wheel spindle. Jack the guide wheel up until the guide wheel just clears the top of the rail. Note the gauge reading. The gauge reading indicates the pounds of load on the guide wheel.

   Note: An easy way to tell when the guide wheel just clears the top of rail is to jack the wheel up approximately 1/4" (6.4 mm) above the top of the rail. Place a piece of paper between the rail and the guide wheel. Lower the guide wheel onto the paper. Slowly jack the guide wheel up while applying a steady pulling force on the paper until the paper can be pulled out. Note the gauge reading when the paper can be removed.

4. With the vehicle at curb weight, the recommended guide wheel load at the specified guide wheel height is:

   Full Sized Vehicles - 6,000 lbs (2,722 kg) GVWR or More

Front Unit	400 - 450 lbs	(181 - 204 kg)
Rear Unit	350 - 400 lbs	(159 - 182 kg)

   Down Sized Vehicles - 6,000 lbs (2,722 kg) GVWR or Less

Front Unit	325 - 375 lbs	(147 - 170 kg)
Rear Unit	275 - 325 lbs	(125 - 147 kg)

5. With the vehicle at curb weight, the minimum load on any guide wheel must be at least 350 lbs (159 kg) for full sized vehicles or 275 lbs (125 kg) for down sized vehicles. With the vehicle loaded, the maximum load on any guide wheel must not exceed 700 lbs (318 kg).

Guide Wheel Load on Track

CHECKING GUIDE WHEEL LOAD

6. If the measured load is less than the minimum guide wheel load or exceeds the maximum guide wheel load on any guide wheel, the guide wheel unit must be adjusted or the vehicle load must be redistributed or some of the load removed. Never operate the vehicle on track if the load on any guide wheel is not within the recommended ranges. See the Adjustments Section - Guide Wheel Equipment Alignment Procedure.

FIGURE 2-4
GUIDE WHEEL OVERLOAD SET SCREWS

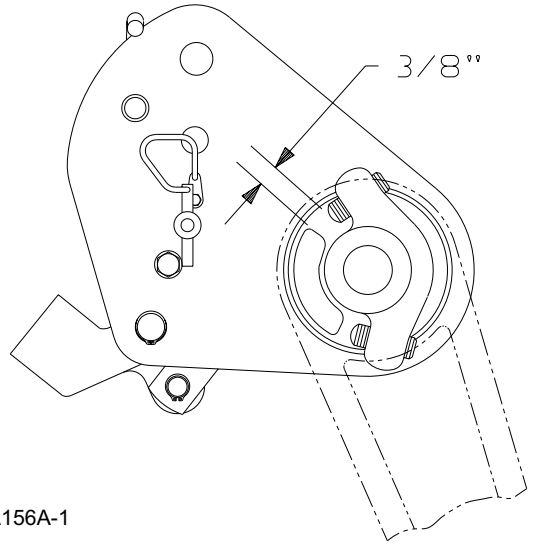

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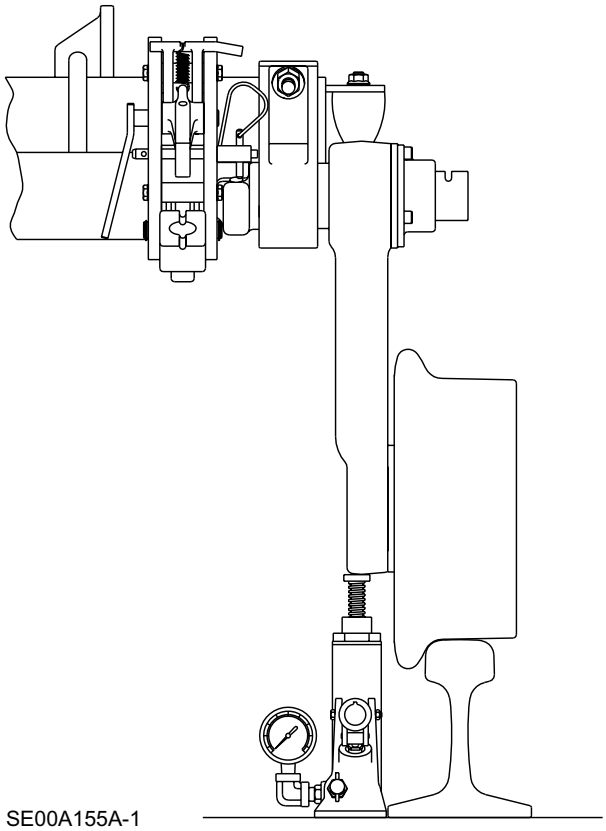
FIGURE 2-5
WHEEL WEIGHING JACK



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Propelling on Track

- **IMPROPER LOADING OF THE HY-RAIL® EQUIPPED VEHICLE CAN CAUSE DERAILMENT OF THE VEHICLE.**

- **ALWAYS CHECK THE GUIDE WHEEL LOAD BEFORE OPERATING THE VEHICLE ON TRACK. MINIMUM LOAD ON ANY GUIDE WHEEL MUST BE AT LEAST 350 LBS (159 kg) FOR FULL SIZED VEHICLES OR 275 LBS (125 kg) FOR DOWN SIZED VEHICLES. MAXIMUM LOAD ON ANY GUIDE WHEEL MUST NOT EXCEED 700 LBS (318 kg). NEVER OPERATE THE VEHICLE ON TRACK IF THE LOAD ON ANY GUIDE WHEEL IS NOT WITHIN THESE RANGES.**

FAILURE TO HEED THESE WARNINGS COULD RESULT IN DERAILMENT OF THE VEHICLE AND/OR SEVERE BODILY INJURY.

- **BEFORE OR WHEN PROPELLING ON TRACK:**
  - **OBSERVE AND FOLLOW ALL RAILROAD SAFETY RULES AND REGULATIONS.**
  - **THE OPERATOR MUST LOOK ALL DIRECTIONS FOR PERSONS OR OBJECTS ON OR ADJACENT TO THE TRACK.**
  - **DO NOT ACCELERATE SUDDENLY. TRACTION IS REDUCED ON TRACK, SPINNING VEHICLE TIRES COULD DAMAGE THEM.**
  - **DO NOT EXCEED 45 MPH (72 km/h) WHEN OPERATING THE VEHICLE ON TRACK. RAILROAD RULES GOVERNING SPEEDS SHOULD BE OBSERVED AT ALL TIMES. REDUCE SPEED WHEN PROPELLING THE VEHICLE THROUGH SWITCHES, CROSSINGS, BRANCH LINES AND ANY SPECIAL TRACK WORKS. OPERATING THE VEHICLE AT UNSAFE SPEEDS COULD RESULT IN DERAILMENT OF THE VEHICLE.**
  - **STEERING LOCK MUST BE ENGAGED AT ALL TIMES WHEN OPERATING THE VEHICLE ON TRACK.**

- **IF THE VEHICLE IS EQUIPPED WITH A STROBE LIGHT (BEACON) AND RAILROAD RULES AND REGULATIONS REQUIRE ITS USE, THE STROBE LIGHT (BEACON) MUST BE ILLUMINATED WHEN OPERATING THE VEHICLE ON TRACK.**

FAILURE TO HEED THESE PRECAUTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.

Vehicles equipped with HR1000 Series A HY-RAIL® Guide Wheel Equipment use the vehicle propulsion system. Do not accelerate suddenly. Traction is reduced on the track, and spinning the vehicle tires could damage them.

Braking on Track

- **PERSONS WHO OPERATE THE VEHICLE MUST BE FAMILIAR WITH TRACK AND WEATHER CONDITIONS THAT MAY AFFECT STOPPING DISTANCE. BE ALERT TO THESE CONDITIONS AND ALLOW ADEQUATE STOPPING DISTANCE.**

- **BE PREPARED TO BRAKE AT ALL HIGHWAY CROSSINGS. THIS VEHICLE WILL NOT OPERATE TRACK SIGNAL CIRCUITS, AND ONCOMING VEHICLES OR PEDESTRIANS MAY NOT YIELD THE RIGHT OF WAY.**

FAILURE TO HEED THESE PRECAUTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.

Vehicles equipped with HR1000 Series A HY-RAIL® Guide Wheel Equipment use the vehicle brake system for braking on track. Stopping distance may be greater on track than on typical road surfaces. Apply the brakes gradually to avoid sliding the tires.

Removing Vehicle from Track

- **PLACE VEHICLE AUTOMATIC TRANSMISSION IN "PARK" OR MANUAL TRANSMISSION IN "NEUTRAL". APPLY THE PARKING BRAKE.**
- **UNDERSTAND EQUIPMENT OPERATION AND BE AWARE OF ALL PINCH POINTS BEFORE OPERATING OR MAKING ADJUSTMENTS TO GUIDE WHEEL EQUIPMENT.**
- **BEFORE PROPELLING THE VEHICLE OFF TRACK, MAKE SURE:**
  - **ALL FOUR GUIDE WHEELS ARE RAISED, LOCKED IN THE HIGHWAY POSITION, AND SECURED WITH THE LOCK PIN.**
  - **THE STEERING WHEEL LOCK IS DISENGAGED.**

FAILURE TO HEED THESE WARNINGS COULD RESULT IN SEVERE BODILY INJURY.

- **THE SUPPLIED HAND LEVERS ARE DESIGNED FOR OPERATING ONLY PROPERLY MAINTAINED GUIDE WHEEL EQUIPMENT. DO NOT USE THE HAND LEVER FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT WAS DESIGNED. IF THE HAND LEVER IS DAMAGED (BENT, BROKEN, ETC.), IT MUST NOT BE REPAIRED (STRAIGHTENED, WELDED, ETC.), IT MUST BE REPLACED.**
- **OBSERVE AND FOLLOW ALL RAILROAD SAFETY RULES AND REGULATIONS.**
- **IF THE VEHICLE IS EQUIPPED WITH A STROBE LIGHT (BEACON) AND RAILROAD RULES AND REGULATIONS REQUIRE ITS USE, THE STROBE LIGHT (BEACON) MUST BE ILLUMINATED WHEN OPERATING THE VEHICLE ON TRACK AND WHEN REMOVING VEHICLE FROM TRACK.**

FAILURE TO HEED THESE PRECAUTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.

RAISING GUIDE WHEELS

1. Ensure that highway vehicles are not approaching the grade crossing while removing vehicle from track. To ensure safety, flag the crossing per railroad rules and regulations.
2. Approach a road crossing and stop with the vehicle front wheels on the crossing.
3. Place automatic transmission in "PARK" or manual transmission in "NEUTRAL". Apply the parking brake.
4. See Figures 2-2 and 2-3. Disengage the steering lock. Steering locks may vary from vehicle to vehicle but will operate similarly.
5. Raise the front guide wheels first. Then the rear guide wheels.

Removing Vehicle from Track

RAISING GUIDE WHEELS

6. See Figure 2-1. Remove lock pin (1). Button in "T" end of the pin must be pressed in to remove the pin. Place the lock pin in a location so that it does not become entangled in the mechanical lock mechanism.

7. Move the spring loaded lever (2) down to allow the locking mechanism to disengage.

8. Insert the yellow end (B) of hand lever (6) into socket (5). Push down on the lever to release the locking mechanism. While maintaining a firm grip on the hand lever, lift the hand lever (6) to raise the guide wheel until it rests on the rail.

   If the locking mechanism does not release due to ice or slush build-up in the locking mechanism, pull on the "icebreaker" handle (3) while pushing down on hand lever (6). This should release the locking mechanism.

9. Remove the hand lever (6) from socket (5) and insert the opposite end (A) into socket (4). Push down on the hand lever, forcing the guide wheel up until the locking mechanism automatically engages, securing the guide wheel in the "highway" position.

10. Insert lock pin (1) to secure the locking mechanism. Button in "T" end of the pin must be pressed in to insert the lock pin. Remove hand lever (6) from socket (4).

11. Repeat Steps 6 through 10 to raise the other front guide wheel to the "highway" position.

12. After the front guide wheels are locked in the "highway" position, follow the same procedure to raise and lock the rear guide wheels in the "highway" position.

Highway Operation

■ **THIS MULTIPURPOSE VEHICLE HAS SPECIAL DESIGNS AND EQUIPMENT FEATURES FOR OFF-ROAD USE. IT HANDLES DIFFERENTLY FROM AN ORDINARY PASSENGER CAR IN DRIVING CONDITIONS THAT MAY OCCUR ON STREETS, HIGHWAYS AND OFF-ROAD. WEIGHT AND LOCATION OF AVAILABLE PAYLOAD MAY ALSO AFFECT THE HANDLING OF THIS VEHICLE. DRIVE WITH CARE AND WEAR SAFETY BELTS AT ALL TIMES. READ VEHICLE OWNER'S MANUAL FOR ADDITIONAL PRECAUTIONS.**

Towing Trailer / Equipment With The Vehicle On Track

- **THE VEHICLE USED FOR TOWING MUST BE RATED BY VEHICLE MANUFACTURER FOR WEIGHT OF TRAILER / EQUIPMENT TO BE TOWED. DO NOT EXCEED VEHICLE MANUFACTURER'S MAXIMUM RATED TOWING CAPACITY.**

- **THE TOWING VEHICLE MUST WEIGH AS MUCH OR MORE THAN TRAILER / EQUIPMENT BEING TOWED.**

- **THE VEHICLE USED FOR TOWING MUST HAVE AN ADEQUATE BRAKE SYSTEM TO SAFELY DECELERATE AND STOP THE TOWING VEHICLE AND THE TRAILER / EQUIPMENT BEING TOWED.**

- **TOWING TRAILER / EQUIPMENT LENGTHENS STOPPING DISTANCES. ALLOW ADEQUATE DISTANCE FOR STOPPING. ANTICIPATE STOPS SO YOU CAN BRAKE GRADUALLY.**

- **STOPPING DISTANCE IS GREATER ON TRACK THAN ON TYPICAL ROAD SURFACES. APPLY BRAKES GRADUALLY TO AVOID SLIDING VEHICLE TIRES AND GUIDE WHEELS.**

- **TOW TRAILER / EQUIPMENT AT A REASONABLE SPEED, 20 MPH (32 km/h) MAXIMUM, TAKING INTO ACCOUNT TRACK CONDITIONS, TRACK GRADE, WEATHER, VISIBILITY AND STOPPING DISTANCE TO ASSURE SAFE OPERATION. RAILROAD RULES GOVERNING SPEEDS AND RIGHT OF WAY SHOULD BE OBSERVED AT ALL TIMES.**

- **THE TRAILER / EQUIPMENT BEING TOWED MUST BE IN A SAFE, USABLE CONDITION TO BE TOWED.**

- **MAKE SURE THAT THE VEHICLE HAS:**
  - **THE FRONT AND REAR GUIDE WHEELS LOWERED AND LOCKED IN THE RAIL POSITION.**
  - **ALL FRONT AND REAR GUIDE WHEEL FLANGES ENGAGED ON THE INSIDE OF THE RAILS.**
  - **THE STEERING WHEEL LOCK ENGAGED WITH THE FRONT WHEELS STRAIGHT AHEAD.**

FAILURE TO HEED THESE WARNINGS COULD RESULT IN SEVERE BODILY INJURY.

Towing Trailer / Equipment With The Vehicle On Track

- **CAREFULLY AND THOROUGHLY PREPARE THE VEHICLE FOR TOWING, MAKING SURE TO USE THE RIGHT TOWING EQUIPMENT AND TO ATTACH IT PROPERLY.**

- **THE TOWING EQUIPMENT (HITCHES, TOW BARS, ETC.) MUST BE ATTACHED TO THE VEHICLE FRAME. DO NOT MOUNT OR ATTACH THE TOWING EQUIPMENT TO VEHICLE RAIL PILOT UNITS.**

- **THE TOWING EQUIPMENT (HITCHES, TOW BARS, ETC.) MUST HAVE A RATED TOWING CAPACITY EQUAL TO OR GREATER THAN THE WEIGHT OF TRAILER / EQUIPMENT BEING TOWED.**

- **USE A RIGID TYPE TOW BAR WITH SAFETY LOCKING COUPLERS. DO NOT USE CHAIN, WIRE ROPE ETC.**

- **OBSERVE AND FOLLOW ALL RAILROAD SAFETY RULES AND REGULATIONS.**

- **DO NOT ACCELERATE SUDDENLY. TRACTION IS REDUCED ON TRACK, SPINNING THE VEHICLE TIRES COULD DAMAGE THEM.**

FAILURE TO HEED THESE PRECAUTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.

Towing Trailer / Equipment With The Vehicle On Track

1. See your vehicle operator's manual for towing information.

2. Use the vehicle manufacturer's recommendations to determine the maximum weight the towing vehicle can tow. Do not exceed the vehicle manufacturer's maximum rated towing capacity.

3. The towing vehicle must have an adequate brake system to safely decelerate and stop the towing vehicle and the trailer / equipment being towed. The towing vehicle must weigh as much or more than the trailer / equipment being towed.

4. Make sure that the vehicle has:
   a. The front and rear guide wheels lowered and locked in the rail position.
   b. All front and rear guide wheel flanges engaged on the inside of the rails.
   c. The front wheels set straight ahead and the steering wheel lock is engaged.

5. Make sure the towing vehicle and the trailer / equipment are in good working condition (tires, brakes, lights, etc.) and that current maintenance has been performed on the vehicle and trailer / equipment.

6. The towing equipment (hitches, tow bars, etc.) on the towing vehicle must have a rating equal to or greater than the weight of the trailer / equipment being towed.

7. The towing equipment (hitches, tow bars, etc.) must be attached to the towing vehicle frame. Do not mount or attach the towing equipment to the rail pilot units.

8. Observe and follow all railroad safety rules and regulations.

9. Do not accelerate suddenly. Traction is reduced on track. Spinning the vehicle tires could damage them.

10. Stopping distance is greater on track than on typical road surfaces. Apply the vehicle brakes gradually to avoid sliding the vehicle tires and the guide wheels. Towing trailer / equipment lengthens stopping distances. Allow adequate distance for stopping. Anticipate stops so that you can brake gradually.

11. Tow the trailer / equipment on the track at a reasonable speed, 20 MPH (32 km/h) maximum, taking into account track conditions, track grade, weather, visibility and stopping distance to assure safe operation. Railroad rules and regulations governing speed limits and right of way should be observed at all times.

12. Always chock the trailer wheels before unhooking the trailer from the towing vehicle.

Towing Trailer / Equipment With The Vehicle On Road

- **THE VEHICLE USED FOR TOWING MUST BE RATED BY THE VEHICLE MANUFACTURER FOR WEIGHT OF THE TRAILER / EQUIPMENT TO BE TOWED. DO NOT EXCEED THE VEHICLE MANUFACTURER'S MAXIMUM RATED TOWING CAPACITY.**

- **THE VEHICLE USED FOR TOWING MUST HAVE AN ADEQUATE BRAKE SYSTEM TO SAFELY DECELERATE AND STOP THE TOWING VEHICLE AND TRAILER / EQUIPMENT BEING TOWED.**

- **TOWING TRAILER / EQUIPMENT LENGTHENS STOPPING DISTANCES. ALLOW ADEQUATE DISTANCE FOR STOPPING. ANTICIPATE STOPS SO YOU CAN BRAKE GRADUALLY.**

- **TOW TRAILER / EQUIPMENT AT A REASONABLE SPEED TAKING INTO ACCOUNT ROAD CONDITIONS, ROAD GRADE, WEATHER, VISIBILITY AND STOPPING DISTANCE TO ASSURE SAFE OPERATION. POSTED SPEED LIMITS SHOULD BE OBSERVED AT ALL TIMES.**

- **THE TRAILER / EQUIPMENT BEING TOWED MUST BE IN A SAFE, USABLE CONDITION TO BE TOWED.**

- **MAKE SURE THAT THE VEHICLE HAS:**
  - **THE FRONT AND REAR RAIL PILOT UNITS RAISED AND LOCKED IN THE HIGHWAY POSITION.**
  - **THE STEERING WHEEL LOCK DISENGAGED.**

FAILURE TO HEED THESE WARNINGS COULD RESULT IN SEVERE BODILY INJURY.

Towing Trailer / Equipment With The Vehicle On Road

- **THIS MULTIPURPOSE VEHICLE HAS SPECIAL DESIGNS AND EQUIPMENT FEATURES FOR OFF-ROAD USE. IT HANDLES DIFFERENTLY FROM AN ORDINARY PASSENGER CAR IN DRIVING CONDITIONS THAT MAY OCCUR ON STREETS, HIGHWAYS AND OFF-ROAD. WEIGHT AND LOCATION OF AVAILABLE PAYLOAD MAY ALSO AFFECT THE HANDLING OF THIS VEHICLE. DRIVE WITH CARE AND WEAR SAFETY BELTS AT ALL TIMES. READ VEHICLE OWNER'S MANUAL FOR ADDITIONAL PRECAUTIONS.**

- **OBSERVE AND FOLLOW ALL FEDERAL, STATE AND LOCAL DRIVING RULES AND REGULATIONS.**

- **STATE LAWS MAY REQUIRE TOWING VEHICLE AND TRAILER / EQUIPMENT BEING TOWED TO BE EQUIPPED WITH SPECIAL SAFETY EQUIPMENT (MIRRORS ON BOTH SIDES OF TOWING VEHICLE, TRAILER BRAKES, TRAILER LIGHTS, ETC.).**

- **CAREFULLY AND THOROUGHLY PREPARE YOUR VEHICLE FOR TOWING, MAKING SURE TO USE THE RIGHT TOWING EQUIPMENT AND TO ATTACH IT PROPERLY.**

- **THE TOWING EQUIPMENT (HITCHES, TOW BARS, ETC.) MUST BE ATTACHED TO THE VEHICLE FRAME. DO NOT MOUNT OR ATTACH TOWING EQUIPMENT TO THE RAIL PILOT UNITS.**

- **THE TOWING EQUIPMENT (HITCH, TOW BAR, ETC.) MUST HAVE A RATED TOWING CAPACITY EQUAL TO OR GREATER THAN WEIGHT OF THE TRAILER / EQUIPMENT BEING TOWED.**

FAILURE TO HEED THESE PRECAUTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.

Towing Trailer / Equipment With The Vehicle On Road

1. See your vehicle operator's manual for towing information.

2. Use the vehicle manufacturer's recommendations to determine the maximum weight the towing vehicle can tow. Do not exceed the vehicle manufacturer's maximum rated towing capacity.

3. The towing vehicle must have an adequate brake system to safely decelerate and stop the towing vehicle and the trailer / equipment being towed. Towing trailer / equipment lengthens stopping distances. Allow adequate distance for stopping. Anticipate stops so that you can brake gradually.

4. Make sure that the vehicle has:
   a. The front and rear rail pilot units raised and locked in the highway position.
   b. The steering wheel lock disengaged.

5. Make sure the towing vehicle and the trailer / equipment are in good working condition (tires, brakes, lights, etc.) and that current maintenance has been performed on the vehicle and trailer / equipment.

6. The towing equipment (hitches, tow bars, etc.) on the towing vehicle must have a rating equal to or greater than the weight of the trailer / equipment being towed.

7. The towing equipment (hitches, tow bars, etc.) must be attached to the towing vehicle frame. Do not mount or attach the towing equipment to the rail pilot units.

8. Observe and follow all federal, state and local driving rules, regulations and laws.

9. State laws may require the towing vehicle and/or the trailer / equipment being towed to be equipped with special safety equipment (mirrors on both sides of the towing vehicle, trailer brakes, trailer lights, etc.).

10. Tow the trailer / equipment on the road at a reasonable speed taking into account road conditions, road grade, weather, visibility and stopping distance to assure safe operation. Always observe posted speed limits.

11. Always chock the trailer wheels before unhooking the trailer from the towing vehicle.

Towing The Disabled Vehicle On Track

- **THE TOWING VEHICLE / MACHINE MUST WEIGH AS MUCH OR MORE THAN THE DISABLED VEHICLE BEING TOWED.**

- **THE VEHICLE / MACHINE USED FOR TOWING MUST HAVE AN ADEQUATE BRAKE SYSTEM TO SAFELY DECELERATE AND STOP THE TOWING VEHICLE / MACHINE AND THE DISABLED VEHICLE BEING TOWED.**

- **TOWING THE DISABLED VEHICLE LENGTHENS STOPPING DISTANCES. ALLOW ADEQUATE DISTANCE FOR STOPPING. ANTICIPATE STOPS SO YOU CAN BRAKE GRADUALLY.**

- **TOW THE DISABLED VEHICLE AT A REASONABLE SPEED, 10 MPH (16 km/h) MAXIMUM, TAKING INTO ACCOUNT TRACK CONDITIONS, TRACK GRADE, WEATHER, VISIBILITY AND STOPPING DISTANCE TO ASSURE SAFE OPERATION. RAILROAD RULES GOVERNING SPEED LIMITS AND RIGHT OF WAY SHOULD BE OBSERVED AT ALL TIMES.**

- **STOPPING DISTANCE IS GREATER ON TRACK THAN ON TYPICAL ROAD SURFACES. APPLY BRAKES GRADUALLY TO AVOID SLIDING THE TOWING VEHICLE / MACHINE WHEELS.**

- **MAKE SURE THAT THE DISABLED VEHICLE HAS:**
  - **THE FRONT AND REAR RAIL PILOT UNITS LOWERED AND LOCKED IN THE RAIL POSITION.**
  - **ALL FRONT AND REAR GUIDE WHEEL FLANGES ENGAGED ON THE INSIDE OF THE RAILS.**
  - **THE STEERING WHEEL LOCK ENGAGED WITH THE FRONT WHEELS STRAIGHT AHEAD.**

FAILURE TO HEED THESE WARNINGS COULD RESULT IN SEVERE BODILY INJURY.

Towing The Disabled Vehicle On Track

- **THE TOW BAR MUST BE ATTACHED TO DISABLED VEHICLE FRAME. DO NOT MOUNT OR ATTACH THE TOW BAR TO THE DISABLED VEHICLE RAIL PILOT UNITS.**
- **THE TOW BAR MUST HAVE A RATED TOWING CAPACITY EQUAL TO OR GREATER THAN WEIGHT OF THE DISABLED VEHICLE BEING TOWED.**
- **USE A RIGID TYPE TOW BAR WITH SAFETY LOCKING COUPLERS. DO NOT USE CHAIN, WIRE ROPE ETC.**
- **OBSERVE AND FOLLOW ALL RAILROAD SAFETY RULES AND REGULATIONS.**
- **DO NOT ACCELERATE SUDDENLY. TRACTION IS REDUCED ON TRACK, SPINNING THE TOWING VEHICLE / MACHINE WHEELS COULD DAMAGE THEM.**
- **TOW THE DISABLED VEHICLE TO THE NEAREST ROAD CROSSING AND REMOVE IT FROM THE TRACK.**

FAILURE TO HEED THESE PRECAUTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.

Towing The Disabled Vehicle On Track

1. See your vehicle operator's manual for towing information.

2. The towing vehicle / machine must have an adequate brake system to safely decelerate and stop the towing vehicle / machine and the disabled vehicle being towed. The towing vehicle / machine must weigh as much or more than the disabled vehicle towed.

3. Make sure that the disabled vehicle has:
   a. The front and rear rail pilot units lowered and locked in the rail position.
   b. All front and rear guide wheel flanges engaged on the inside of the rails.
   c. The front wheels are set straight ahead and the steering wheel lock is engaged.

4. Make sure the towing vehicle / machine is in good working condition (tires, brakes, lights, etc.) and that current maintenance has been performed on the vehicle / machine.

5. The towing equipment (hitches, tow bars, etc.) on the towing vehicle / machine must have a rating equal to or greater than the weight of the disabled vehicle being towed.

6. The tow bar must be mounted or attached to the disabled vehicle's frame. Do not mount or attach the tow bar to the disabled vehicle's rail pilot units. Use a rigid type tow bar with safety locking couplers.

7. Observe and follow all railroad safety rules and regulations.

8. Do not accelerate suddenly. Traction is reduced on track. Spinning the towing vehicle tires / machine wheels could damage them.

9. Stopping distance is greater on track than on typical road surfaces. Apply the towing vehicle / machine brakes gradually to avoid sliding the vehicle tires / machine wheels. Towing disabled vehicle lengthens stopping distances. Allow adequate distance for stopping. Anticipate stops so that you can brake gradually.

10. Tow the disabled vehicle on the track at a reasonable speed, 10 MPH (16 km/h) maximum, taking into account track conditions, track grade, weather, visibility and stopping distance to assure safe operation. Railroad rules and regulations governing speed limits and right of way should be observed at all times.

11. Tow the disabled vehicle to the nearest road crossing and remove the vehicle from the track.

Towing The Disabled Vehicle On Road

- **TOW THE DISABLED VEHICLE PER THE VEHICLE MANUFACTURER'S TOWING SPECIFICATIONS LISTED IN YOUR VEHICLE'S OPERATORS MANUAL.**

- **THE VEHICLE USED FOR TOWING MUST HAVE AN ADEQUATE BRAKE SYSTEM TO SAFELY DECELERATE AND STOP TOWING VEHICLE AND DISABLED VEHICLE BEING TOWED.**

- **TOW THE DISABLED VEHICLE AT A REASONABLE SPEED TAKING INTO ACCOUNT ROAD CONDITIONS, ROAD GRADE, WEATHER, VISIBILITY AND STOPPING DISTANCE TO ASSURE SAFE OPERATION. POSTED SPEED LIMITS SHOULD BE OBSERVED AT ALL TIMES.**

- **MAKE SURE THE DISABLED VEHICLE HAS:**
  - **THE FRONT AND REAR RAIL PILOT UNITS RAISED AND LOCKED IN THE HIGHWAY POSITION.**
  - **THE STEERING WHEEL LOCK DISENGAGED.**

FAILURE TO HEED THESE WARNINGS COULD RESULT IN SEVERE BODILY INJURY.

- **TOWING EQUIPMENT (TOW TRUCK, TOW BARS, ETC.) MUST BE ATTACHED TO THE DISABLED VEHICLE FRAME. DO NOT MOUNT OR ATTACH TOWING EQUIPMENT TO THE DISABLED VEHICLE RAIL PILOT UNITS.**

- **THE TOWING EQUIPMENT (TOW TRUCK, TOW BARS, ETC.) MUST HAVE A RATED TOWING CAPACITY EQUAL TO OR GREATER THAN WEIGHT OF THE DISABLED VEHICLE BEING TOWED.**

- **OBSERVE AND FOLLOW ALL FEDERAL, STATE AND LOCAL DRIVING RULES AND REGULATIONS.**

- **STATE LAWS MAY REQUIRE TOWING VEHICLE AND DISABLED VEHICLE TO BE EQUIPPED WITH SPECIAL SAFETY EQUIPMENT (LIGHTS, ETC.).**

FAILURE TO HEED THESE PRECAUTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.

Towing The Disabled Vehicle On Road

1. See your vehicle operator's manual for towing information.

2. The towing vehicle must have an adequate brake system to safely decelerate and stop the towing vehicle and the disabled vehicle being towed.

3. Make sure that the disabled vehicle has:
   a. The front and rear rail pilot units raised and locked in the highway position.
   b. The steering wheel lock is disengaged.

4. Make sure the towing vehicle is in good working condition (tires, brakes, lights, etc.) and that current maintenance has been performed on the vehicle.

5. The towing equipment (tow truck, tow bars, etc.) on the towing vehicle must have a rating equal to or greater than the weight of the disabled vehicle being towed.

6. The towing equipment (tow truck, tow bars, etc.) must be mounted or attached to the disabled vehicle frame. Do not mount or attach the towing equipment to the disabled vehicle's rail pilot units.

7. Observe and follow all federal, state and local driving rules, regulations and laws.

8. State laws may require the towing vehicle and the disabled vehicle being towed to be equipped with special safety equipment (lights, etc.).

9. Tow the disabled vehicle on the road at a reasonable speed taking into account road conditions, road grade, weather, visibility and stopping distance to assure safe operation. Always observe posted speed limits.

SECTION 3 - ADJUSTMENTS
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Guide Wheel Equipment Alignment Procedure

Guide Wheel Equipment Adjustments

Guide Wheel Equipment Alignment Procedure

- **BEFORE PERFORMING ANY ADJUSTMENTS TO THE RAIL PILOT UNITS OR VEHICLE, ALWAYS PLACE THE AUTOMATIC TRANSMISSION IN "PARK" OR THE MANUAL TRANSMISSION IN "NEUTRAL". APPLY PARKING BRAKE.**

- **UNDERSTAND EQUIPMENT OPERATION AND BE AWARE OF ALL PINCH POINTS BEFORE OPERATING OR MAKING ADJUSTMENTS TO THE GUIDE WHEEL EQUIPMENT.**

FAILURE TO HEED THESE WARNINGS COULD RESULT IN SEVERE BODILY INJURY.

The Guide Wheel Alignment Procedure must be completed when the guide wheel equipment is applied to the vehicle, or when any of the misalignment indicators occur. See Operation Section -Misalignment Indicators.

VEHICLE CHECK

1. The vehicle must be at curb weight with permanent attachments: spare tire, tool box less tools, utility box, crane, aerial lift boom, etc. and without: passengers, baggage, load, etc.

2. Permanent attachments to the vehicle such as a tool box, utility box, crane aerial lift boom, etc. which could cause uneven loading on the guide wheels should be compensated for by adjusting the vehicle suspension by adding leaf springs, coil springs, torsion bars, etc.

3. Tires must be inflated to the tire manufacturer's recommended maximum pressure printed on the sidewalls of the tires or the wheel manufacturer's recommended maximum pressure stamped on the wheel, whichever is lower.

4. Visually inspect the entire vehicle, especially the guide wheel equipment for loose or missing bolts and bent or damaged components. Tighten, repair or replace as necessary.

5. Verify that the vehicle that the guide wheel equipment is being mounted on is equipped correctly (springs, tires, wheels, etc.). See the Harsco Track Technologies HY-RAIL® Vehicle Specifications Manual.

6. Check the following measurements on the vehicle that the guide wheel equipment is to be mounted on before applying the guide wheel equipment to the vehicle.

   a. Frame must be square. Diagonal measurements of frame should be equal within 1/8 inch (3.2 mm).

   b. Wheelbase (as measured on each side) must be equal within 1/16 inch (1.8 mm).

   c. Vehicle axles must be square with the frame within 1/64 inch per foot (.4 mm per 305 mm). Harsco Track Technologies, Harsco Corporation recommends that this be checked by a reputable alignment shop.

Guide Wheel Equipment Alignment Procedure

VEHICLE CHECK

7. Follow the mounting instructions on the application drawing which is supplied with each Guide Wheel Equipment Group.

8. After mounting the guide wheel equipment, have the front wheels of the vehicle checked for caster, camber, and toe-in. If necessary, adjust to vehicle manufacturer's recommendations.

PLACING VEHICLE ON TRACK

9. Place the vehicle on straight, level, tangent track or on an alignment rack constructed for guide wheel equipment alignment. Place the automatic transmission in "Park" or manual transmission in "Neutral". Apply the parking brake. Stop the engine. Lower and lock all four guide wheels in the "rail" position. See Operation Section -Placing Vehicle On Track.

   If track or an alignment rack is not available, use 6 x 6 inch lumber, on a level floor, to simulate track. Space the lumber so it measures 56-1/2 inches between the inside edges. Using 6 x 6 inch lumber will allow the wheel weighing jack to fit underneath the wheel arm to weigh the guide wheel load when the guide wheels are in the "rail" position.

10. Set the vehicle wheels straight ahead. Secure the steering wheel using the steering lock.

Guide Wheel Equipment Alignment Procedure

RAIL PILOT UNIT TRACK GAUGE - See Figures 3-1 and 3-7

11. Measure the track gauge of both the front and rear rail pilot units. Measure from back of left wheel flange, directly below the center line of the wheel spindle, to the same point on the right wheel flange. Track gauge must be 53-3/8 - 53-1/2 inches (1356 - 1359 mm) for both the front and rear rail pilot units. If not see Adjustment.

Adjustment

a. Unlock both front and/or both rear guide wheels from the "rail" position. Let the guide wheels rest on the rail.

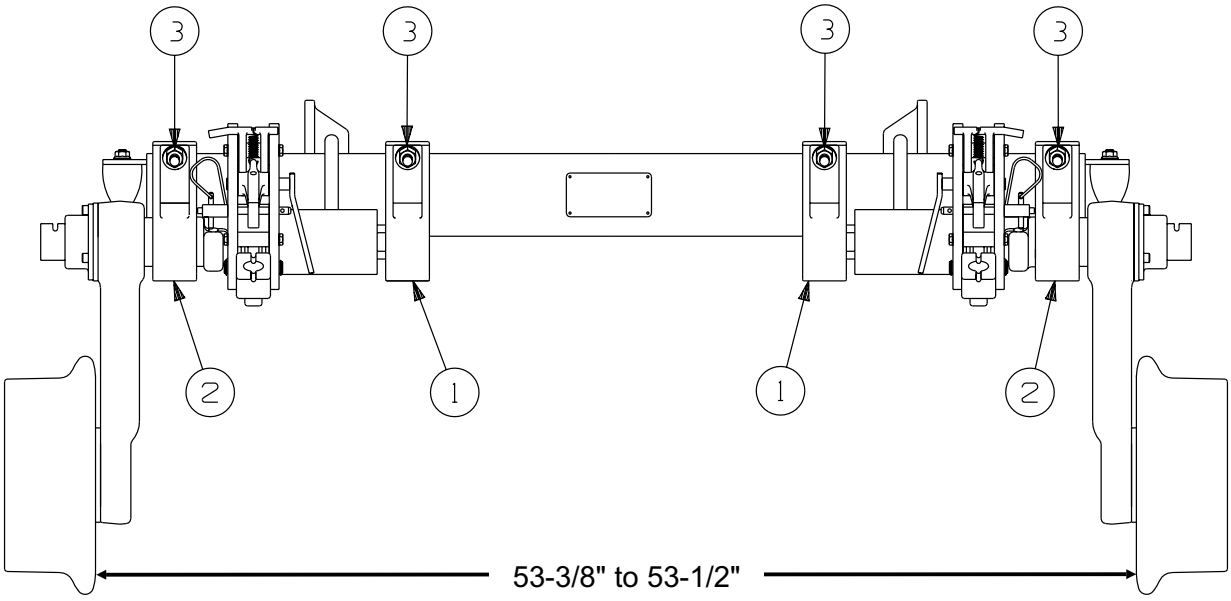
b. Loosen the inner (1) and outer (2) pivot bearing mounting bolts (3). Shift one or both of the guide wheel assemblies.

C. Make sure the two mating surfaces of the pivot bearings are flat against the cross tube. Re-tighten the mounting bolts alternately to ensure the mating surfaces are flat against the cross tube. Torque the mounting bolts to 125 ft lbs (175 N-m).

c. Lock all guide wheels in the "rail" position. Recheck the rail pilot unit track gauge.

d. Repeat the procedure until the rail pilot unit track gauge is correct.

FIGURE 3 - 1
RAIL PILOT UNIT



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Guide Wheel Equipment Alignment Procedure

GUIDE WHEEL ARM VERTICAL HEIGHT
FULL SIZED VEHICLES - 6,000 LBS (2,722 kg) GVWR OR MORE

12. Figure 3-2 illustrates a side view of a typical HR1000 Series A HY-RAIL® Guide Wheel Equipment applied to a full sized vehicle. Rail pilot unit mounts will vary in detail, depending on the vehicle.

13. Lower and lock all four guide wheels in the "rail" position. Measure the vertical distance from the top of the rail to the pivot center of the wheel arm on all guide wheels.

    With the vehicle at curb weight, the recommended height is:

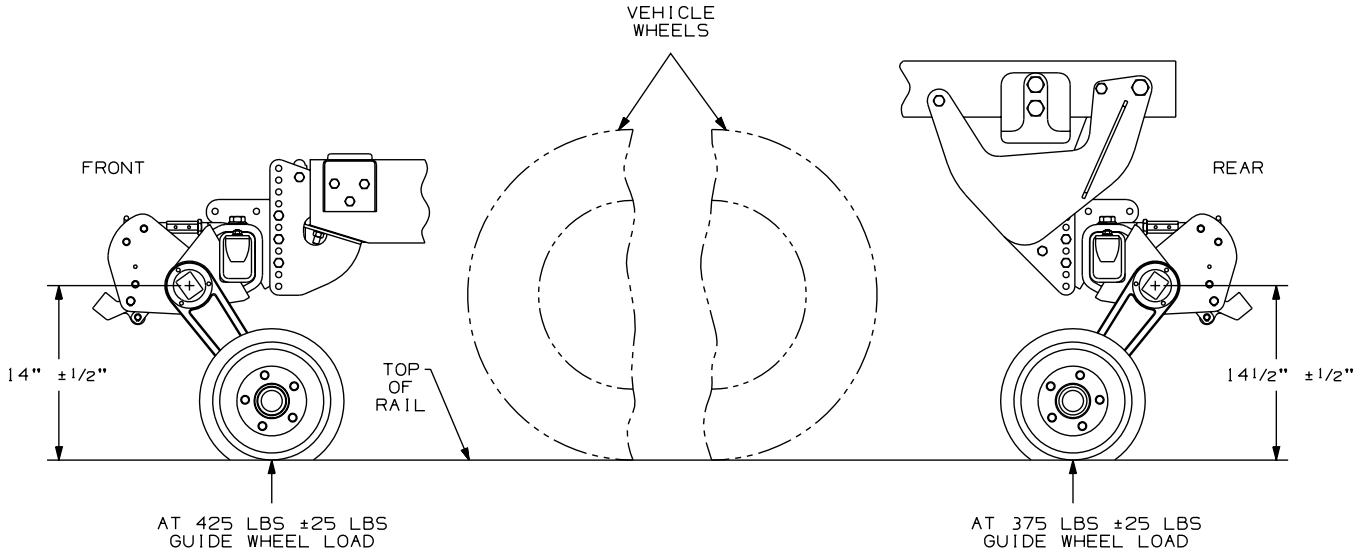
    Front Guide Wheels: 14" ±1/2" (356 mm ±12.7 mm) @ 425 lbs ± 25 lbs (193 kg ± 11 kg) guide wheel load.

    Rear Guide Wheels: 14-1/2" ±1/2" (368 mm ±12.7 mm) @ 375 lbs ± 25 lbs (170 kg ± 11 kg) guide wheel load.

    Note: For maximum load carrying capacity, set both rear wheel arms to the upper recommended height limit.

    If the vertical height is not correct on any of the wheel arms, see Adjustment.

FIGURE 3-2
RAIL PILOT UNIT WHEEL ARM VERTICAL HEIGHT
FULL SIZED VEHICLES - 6000 GVWR OR MORE



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Guide Wheel Equipment Alignment Procedure

GUIDE WHEEL ARM VERTICAL HEIGHT
DOWN SIZED VEHICLES - 6,000 LBS (2,722 kg) GVWR OR LESS

14. Figure 3-3 illustrates a side view of a typical HR1000 Series A HY-RAIL® Guide Wheel Equipment applied to a down sized vehicle. Rail pilot unit mounts will vary in detail, depending on the vehicle.

15. Lower and lock all four guide wheels in the "rail" position. Measure the vertical distance from the top of the rail to the pivot center of the wheel arm on all guide wheels.

With the vehicle at curb weight, the recommended height is:

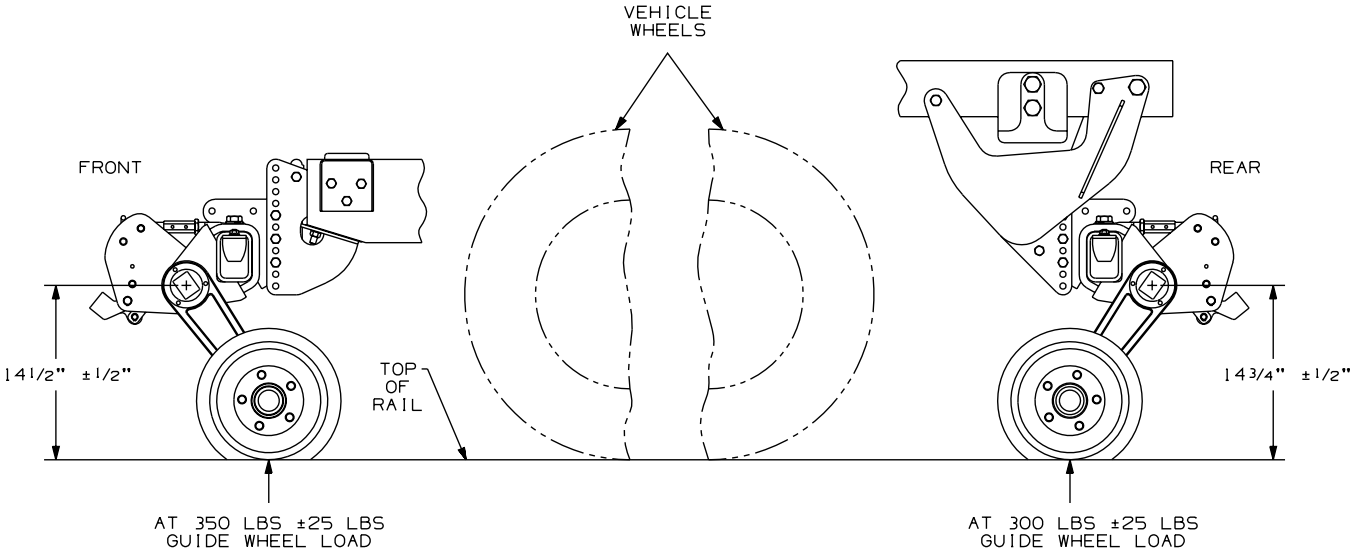
Front Guide Wheels: 14-1/2" ±1/2" (368 mm ±12.7 mm) @ 350 lbs ± 25 lbs (159 kg ± 11 kg) guide wheel load.

Rear Guide Wheels: 14-3/4" ±1/2" (375 mm ±12.7 mm) @ 300 lbs ± 25 lbs (136 kg ± 11 kg) guide wheel load.

Note: For maximum load carrying capacity, set both rear wheel arms to the upper recommended height limit.

If the vertical height is not correct on any of the wheel arms, see Adjustment.

FIGURE 3-3
RAIL PILOT UNIT WHEEL ARM VERTICAL HEIGHT
DOWN SIZED VEHICLES - 6000 GVWR OR LESS



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Guide Wheel Equipment Alignment Procedure

GUIDE WHEEL ARM VERTICAL HEIGHT - See Figures 3-2, 3-3, 3-4 and 3-5

Adjustment

a. Unlock both front and/or both rear guide wheels from the "rail" position. Let the guide wheels rest on the rails.

b. Readjust only the wheel arm(s) that were initially not within the recommended height. The difference between the measured height and the recommended height is the approximate height that the wheel arms must be adjusted.

c. Figures 3-4 and 3-5 illustrate typical mounting bracket configurations used on the front and rear rail pilot units. Mounting brackets may vary in detail, depending on the vehicle.

d. The adjustments can be made in 1 inch increments. Before removing any bolts, securely block the rail pilot unit. Remove cap screws (1) and relocate in a different set of holes in the mounting plate (2). Reinstall and re-tighten the cap screws.

e. Lock all guide wheels in the "rail" position. Recheck the vertical height on all wheel arms.

Note: Any wheel arm height adjustment made may change the guide wheel load. Recheck the guide wheel load. Wheel arm vertical height and guide wheel load must both be attained at the same time within the specified height dimensions and load limits. If the wheel arm vertical height and guide wheel load can not be attained at the same time within the specified height dimensions and load limits, the rubber cords may need to be replaced.

FIGURE 3-4
GUIDE WHEEL ARM VERTICAL ADJUSTMENT
FRONT RAIL PILOT UNIT

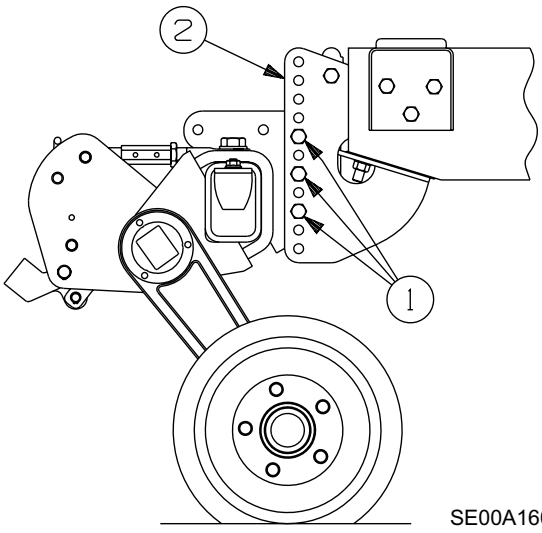

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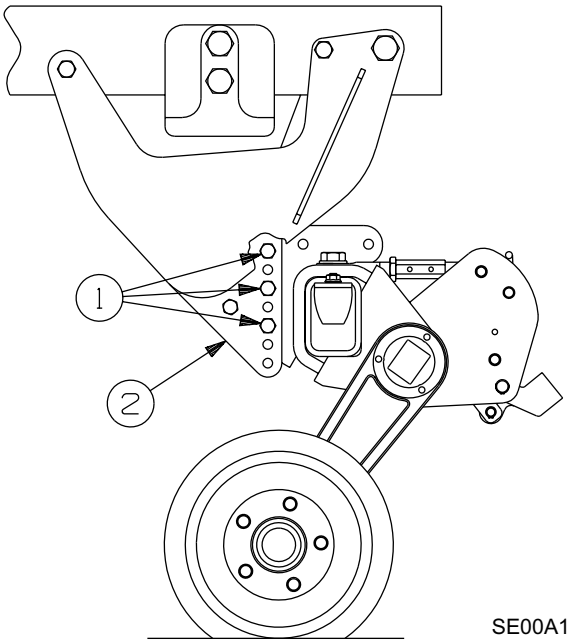
FIGURE 3-5
GUIDE WHEEL ARM VERTICAL ADJUSTMENT
REAR RAIL PILOT UNIT



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Guide Wheel Equipment Alignment Procedure

GUIDE WHEEL LOAD

- **DO NOT USE ANY OTHER JACK THAN THE HARSCO TRACK TECHNOLOGIES WHEEL WEIGHING JACK NO. 073527 TO CHECK THE GUIDE WHEEL LOAD. USE OF ANY OTHER JACK WILL RESULT IN INCORRECT GUIDE WHEEL LOAD INFORMATION.**

- **DO NOT USE THE WHEEL WEIGHING JACK TO LIFT THE VEHICLE. EXCESSIVE WEIGHT MAY CAUSE JACK TO FAIL. MISUSE OF WHEEL WEIGHING JACK MAY CAUSE GAUGE TO EXPLODE. READ ANSI B40.1 AND APPARATUS INSTALLATION / OPERATING INSTRUCTIONS BEFORE USE.**

FAILURE TO HEED THESE PRECAUTIONS COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.

16. Lower and lock all guide wheels in the "rail" position. Do not use any other jack than the Harsco Track Technologies wheel weighing jack no. 073527 to check the guide wheel load. Use of any other jack will result in incorrect guide wheel load information. Place the wheel weighing jack (part no. 073527) under the guide wheel arm directly below the wheel spindle, see Figure 3-6. Jack the guide wheel up until the guide wheel just clears the top of the rail. Note the gauge reading. The gauge reading indicates the pounds of load on the guide wheel.

    Note: An easy way to tell when the guide wheel just clears the top of rail is to jack the wheel up approximately 1/4" (6.4 mm) above the top of the rail. Place a piece of paper between the rail and the guide wheel. Lower the guide wheel onto the paper. Slowly jack the guide wheel up while applying a steady pulling force on the paper until the paper can be pulled out. Note the gauge reading when the paper can be removed.

Guide Wheel Equipment Alignment Procedure

GUIDE WHEEL LOAD

FULL SIZED VEHICLES - 6,000 LBS (2,722 kg) GVWR OR MORE

With the vehicle at curb weight, the recommended guide wheel load is:

Front Guide Wheels: 425 lbs ± 25 lbs (193 kg ± 11 kg) @ 14" ±1/2" (356 mm ±12.7 mm) guide wheel height.

Rear Guide Wheels: 375 lbs ± 25 lbs (170 kg ± 11 kg) @ 14-1/2" ±1/2" (368 mm ±12.7 mm) guide wheel height.

DOWN SIZED VEHICLES - 6,000 LBS (2,722 kg) GVWR OR LESS

With the vehicle at curb weight, the recommended guide wheel load is:

Front Guide Wheels: 350 lbs ± 25 lbs (159 kg ± 11 kg) @ 14-1/2" ±1/2" (368 mm ±12.7 mm) guide wheel height.

Rear Guide Wheels: 300 lbs ± 25 lbs (136 kg ± 11 kg) @ 14-3/4" ±1/2" (375 mm ±12.7 mm) guide wheel load.

Note: For maximum load carrying capacity, set both rear guide wheels to the lower recommended load limit.

With the vehicle loaded, the maximum guide wheel load is 700 lbs (318 kg).

If the load is not correct on any guide wheel, see Adjustment.

Guide Wheel Equipment Alignment Procedure

GUIDE WHEEL LOAD - See Figures 3-6 and 3-7

Adjustment

a. Unlock both front and/or rear guide wheels from the "rail" position. Let the guide wheels rest on the rails.

b. Figure 3-7 illustrates the load adjustment turnbuckle on the front and rear units. Each guide wheel is adjusted independently of the other.

c. Loosen the jam nut (1).

To Increase The Load: Turn the adjusting turnbuckle (2) counter-clockwise, shortening the distance between the rod ends.

If the threaded ends of the turnbuckle bottom out against each other before the recommend guide wheel load is achieved, the pilot unit must be relocated in a lower set of holes in the mounting brackets.

To Decrease The Load: Turn the adjusting turnbuckle (2) clockwise, lengthening the distance between the rod ends.

The threaded ends of either rod end must not be threaded out past the inspection holes (3) in the turnbuckle barrel. If the threads on the rod ends are screwed out past the inspection holes before the recommended guide wheel load is achieved, the pilot unit must be relocated in a higher set of holes in the mounting brackets.

d. Lock all guide wheels in the "rail" position. Recheck the guide wheel load on all guide wheels. When the load indicated is within the recommended weight, tighten the jam nut (1) securely.

Note: Any guide wheel load adjustment made may change the guide wheel arm vertical height. Recheck the guide wheel arm vertical height. Guide wheel load and guide wheel arm vertical height must both be attained at the same time within the specified load limits and height dimensions.

Guide Wheel Equipment Alignment Procedure

GUIDE WHEEL LOAD - continued

FIGURE 3-6
WHEEL WEIGHING JACK

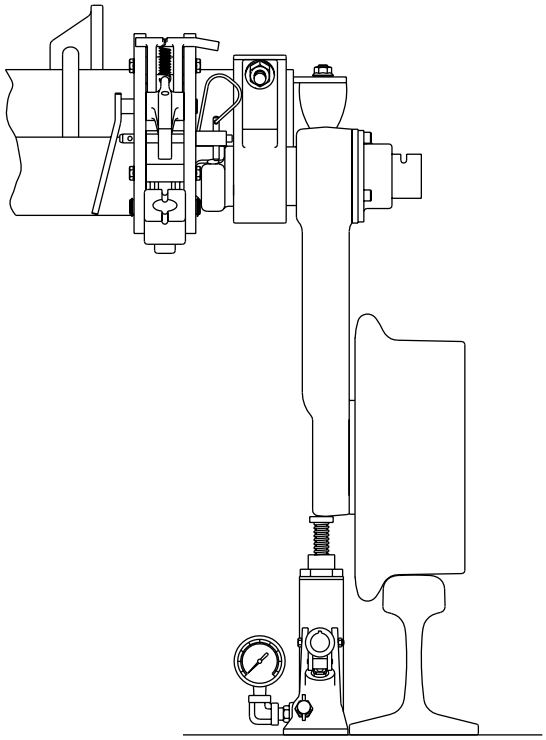

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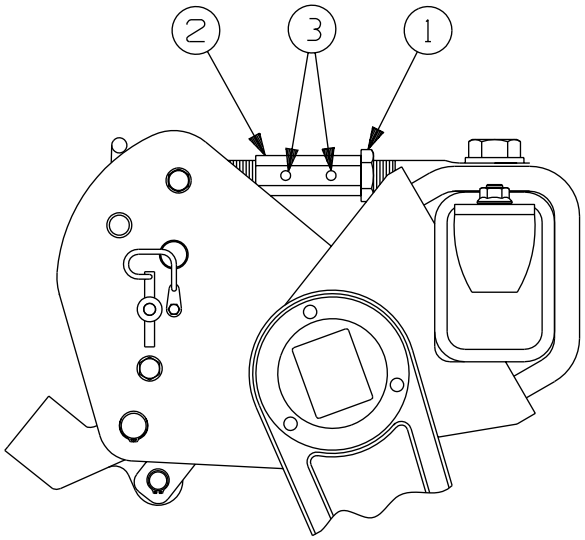
FIGURE 3-7
LOAD ADJUSTING TURNBUCKLE



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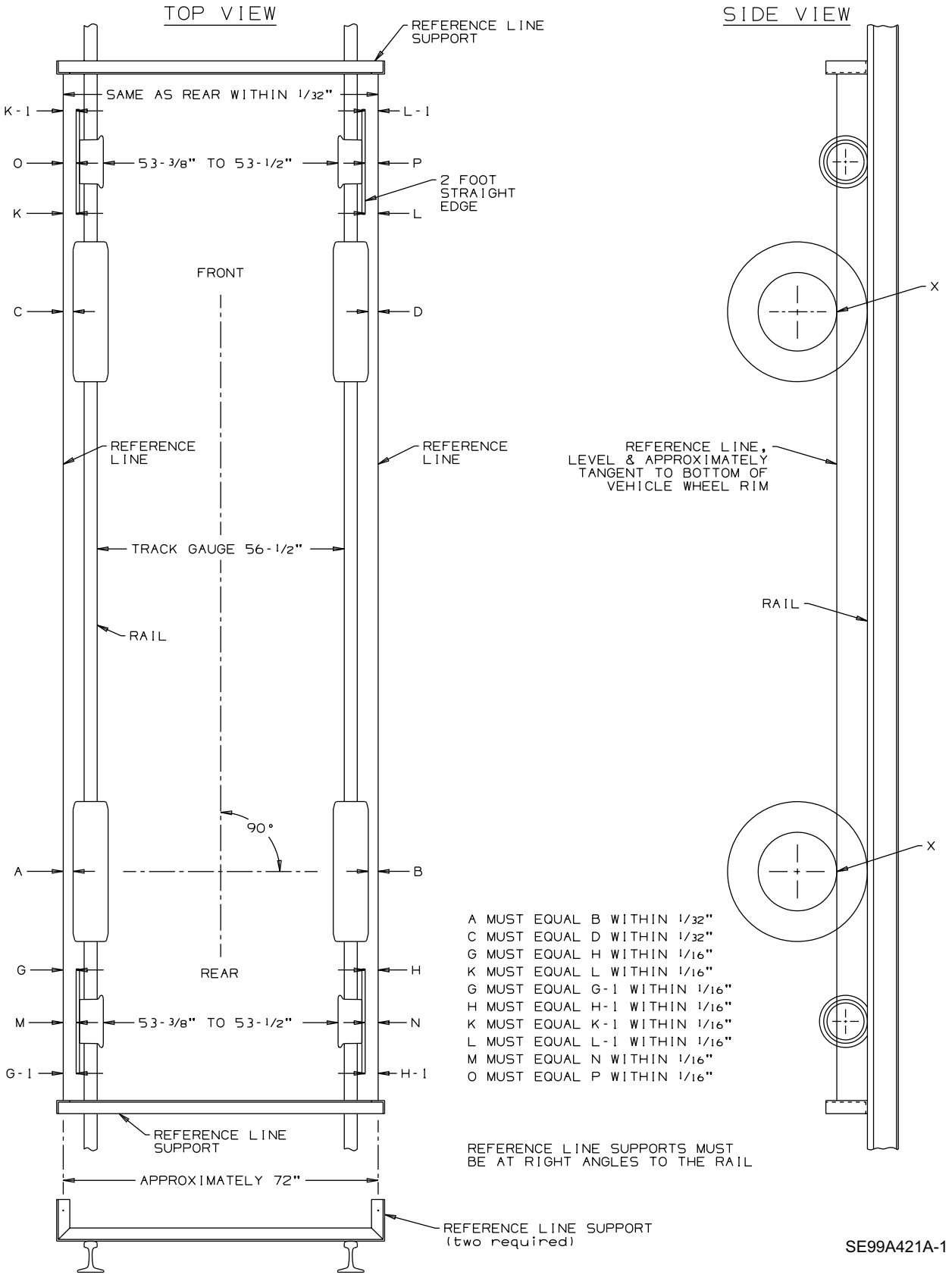
Guide Wheel Equipment Alignment Procedure

FIGURE 3-8
GUIDE WHEEL EQUIPMENT ALIGNMENT



Guide Wheel Equipment Alignment Procedure

STRING LINING SET-UP - See Figure 3-8

The string lining procedure is only a guide to check and make alignment adjustments to the guide wheel equipment. String lining the vehicle and guide wheel equipment will not guarantee that the guide wheel equipped vehicle will track properly. Harsco Track Technologies recommends that all HY-RAIL® equipped vehicles be track tested. The vehicle should be at its normal operating load for track testing. The vehicle should be track tested when:

a. The guide wheel equipment is installed on the vehicle.
b. Any adjustments are made to the guide wheel equipment.
c. The load on the vehicle is changed.
d. Periodically to ensure that the vehicle is tracking properly.

17. Establish parallel reference lines on each side of vehicle as shown in Figure 3-8.

18. Parallel reference lines can be established by building two supports or brackets. These can be built out of scrap angle iron or other material. The supports should be approximately 6 inches high, and a few inches longer than the width of the vehicle. Wires or cords stretched between the front and rear supports will be the reference lines. The wires or cords should be spaced approximately 72 inches apart. The distance between the wires or cords must be equal or within 1/32 inch at each support.

19. Clamp the supports to the rail in front of and behind the vehicle. The supports should be at right angles to the rail. Stretch the wires or cords between the supports, level with the bottom edge of the vehicle wheel rim (point X). The reference lines must be level.

20. Shift the supports on the rail until dimensions A = B and C = D are equal or within 1/32 inch. These measurements should be taken from the edge of the vehicle rim directly below the axle (point X) to the reference line. When shifting the supports, keep them at right angles to the rail so the reference lines stay level and parallel to each other. Rotate the vehicle wheels 180 degrees and recheck the measurements. If the measurements change, set the reference lines at the average of the two measurements.

21. After the reference lines have been established, measurements can be taken from these lines to the guide wheels to ensure correct alignment.

Guide Wheel Equipment Alignment Procedure

RAIL PILOT UNIT ALIGNMENT - See Figures 3-8 and 3-9

22. Lower and lock all guide wheels in the "rail" position. Take measurements M, N, O & P. Measure from the outer edge of the guide wheels, directly below the center line of the wheel spindle, to the reference line. Measurements M, N, O & P must all be equal or within 1/16 inch. If not, see Adjustment.

Adjustment

a. Unlock both front and/or both rear guide wheels from the "rail" position. Let the guide wheels rest on the rails.

b. Loosen the two cross tube mounting bolts (3). Shift the entire rail pilot unit until measurements M, N, O & P are all equal. Make sure the two mating surfaces of the mounting brackets are flat against the cross tube. Re-tighten the mounting bolts alternately to ensure the mating surfaces are flat against the cross tube. Torque the mounting bolts to 125 ft lbs (175 N-m).

c. Lock all guide wheels in the "rail" position. Recheck the rail pilot unit alignment.

d. Repeat the procedure until the rail pilot unit alignment is correct.

23. Lower and lock all guide wheels in the "rail" position. The guide wheels must track straight, not toed in or out. Hold a two foot long straight edge against the outer edge of the guide wheel with the straight edge centered on the guide wheel. Check that dimensions G = G-1, H = H-1, K = K-1 & L = L-1. These dimensions must be equal or within 1/16 inch. If not, see Adjustment.

Note: When verifying whether the guide wheel is toed-in or toed-out, it may be helpful to visualize the traveling direction of the vehicle when in rail position.

The guide wheel is toed-in if the front dimension of the straight edge to the reference line is larger than the rear dimension. (Example - Left Rear Guide Wheel: Dimension G is larger than dimension G-1).

The guide wheel is toed-out if the front dimension of the straight edge to the reference line is smaller than the rear dimension. (Example - Left Rear Guide Wheel: Dimension G is smaller than dimension G-1).

a. Unlock both front and/or both rear guide wheels from the "rail" position. Let the guide wheels rest on the rails.

b. Loosen the appropriate inner (1) or outer (2) pivot bearing mounting bolts. Add or remove shims (4) (part no. 138114) between the pivot bearing and cross channel. Re-tighten the mounting bolts alternately to ensure the mating surfaces are flat against the cross tube. Torque the mounting bolts to 125 ft lbs (175 N-m).

Guide Wheel Equipment Alignment Procedure

RAIL PILOT UNIT ALIGNMENT - continued

Adjustment

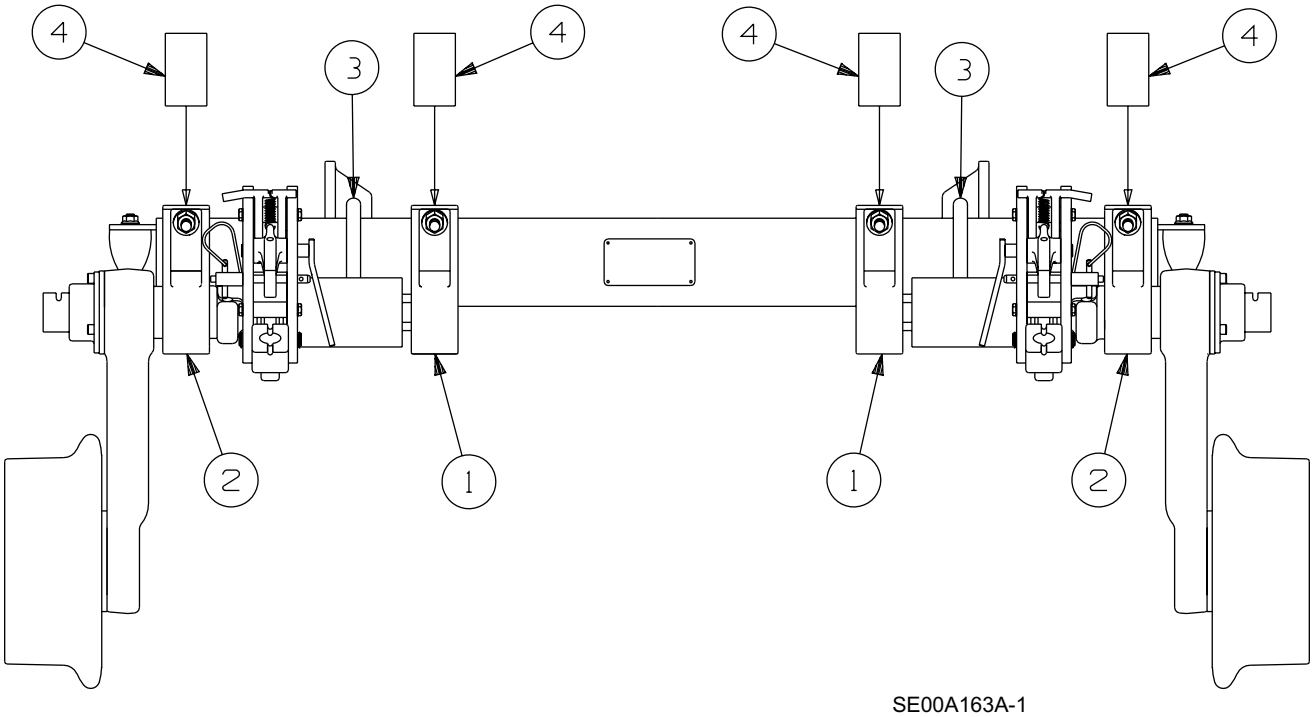
Note: Do not use more than two shims on any pivot bearing during the original application of the guide wheel units or three shims on any pivot bearing during field inspection and adjustment.

Front Guide Wheel Toed In:	Add shims to inner pivot bearing or remove shims from outer pivot bearing.
Front Guide Wheel Toed Out:	Add shims to outer pivot bearing or remove shims from inner pivot bearing.
Rear Guide Wheel Toed In:	Add shims to outer pivot bearing or remove shims from inner pivot bearing.
Rear Guide Wheel Toed Out:	Add shims to inner pivot bearing or remove shims from outer pivot bearing.

c. Lock all guide wheels in the "rail" position. Recheck the rail pilot unit alignment.

d. Repeat the procedure until the rail pilot unit alignment is correct.

FIGURE 3-9
RAIL PILOT UNIT



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Guide Wheel Equipment Alignment Procedure

GUIDE WHEEL OVERLOAD SET SCREWS - See Figure 3-10

24. The "rail" overload set screws carry the load in case of an overload or a tire failure, instead of transferring the load through the rubber cords when the guide wheels are in the "rail" position. Each guide wheel has one overload set screws for a combined total of four on the vehicle.

25. Lower and lock all guide wheels in the "rail" position. With the vehicle at curb weight, measure the distance between the set screw and the stop on the casting.

The recommended dimension for all four overload set screws is 3/8 inch (9.5 mm).

Note: An easy way to check the dimension is to insert a 3/8 inch cap screw in the gap. If the cap screw slips in with little play, the overload dimension is correct. If the cap screw does not slip in or is sloppy, adjustment is necessary.

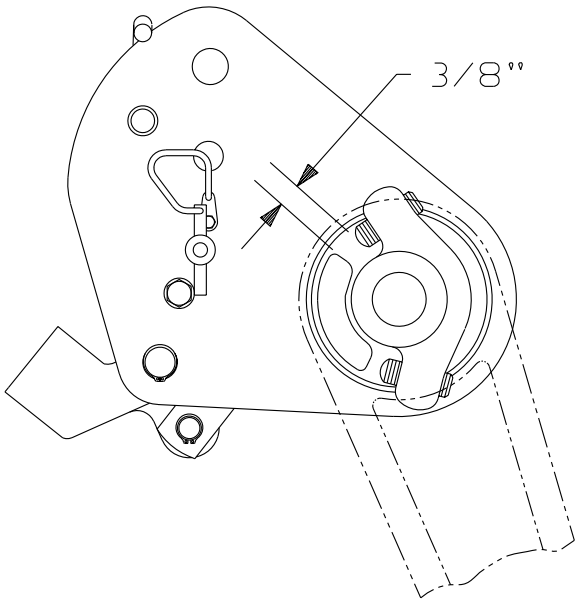
If any of the four overload set screws are not set correctly, see Adjustment.

Adjustment

a. Insert the 3/8 inch cap screw in the gap. Tighten or loosen the set screw until the cap screw is snug with little play.

b. Repeat the procedure to adjust all four overload set screws.

FIGURE 3-10
GUIDE WHEEL OVERLOAD ADJUSTMENT



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Guide Wheel Equipment Alignment Procedure

GUIDE WHEEL HIGHWAY SET SCREWS - See Figure 3-11

26. The highway set screws secure the guide wheel arms (1) against the rubber bumpers (2) on the cross frame when the rail pilot units are in the "highway" position. The rubber bumpers absorb the shocks encountered in highway driving instead of transferring the shocks through the rubber cords. Each guide wheel has one highway set screw for a combined total of four on the vehicle.

27. Raise and lock all guide wheels in the "highway" position. The wheel arms (1) should be solidly against the rubber bumpers (2). If any of the highway set screws (3) are not set correctly, see adjustment.

Adjustment

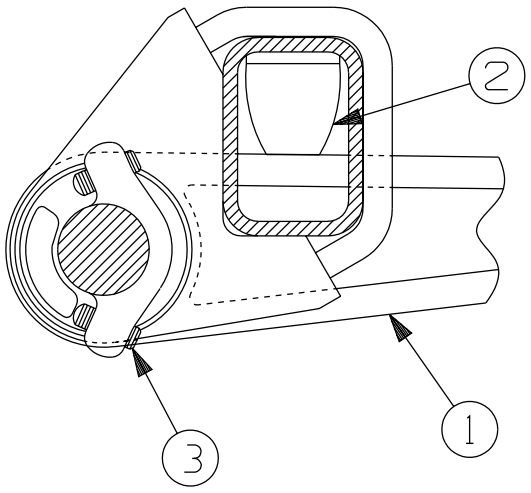
a. Unlock the guide wheel from the "highway" position. Let the guide wheel rest on the rails.

b. Turn the highway set screw (3) to move the wheel arm up or down.

c. Lock the guide wheel in the "highway" position. Recheck the guide wheel arm.

d. Repeat the procedure until the guide wheel arm (1) is solidly against the rubber bumper (2). If the rubber bumper is worn so the arm cannot be adjusted solidly against it, replace the bumper.

FIGURE 3-11
GUIDE WHEEL HIGHWAY ADJUSTMENT



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Guide Wheel Equipment Alignment Procedure

VEHICLE TRACK TEST

■ **CHECK AND CORRECT ALIGNMENT PROMPTLY IF MISALIGNMENT IS INDICATED. MISALIGNMENT OF GUIDE WHEEL EQUIPMENT COULD RESULT IN DERAILMENT OF THE VEHICLE AND SEVERE BODILY INJURY.**

28. Harsco Track Technologies recommends that all HY-RAIL® equipped vehicles be track tested. The vehicle should be at its normal operating load for track testing. The vehicle should be track tested when:
    a. The guide wheel equipment is installed on the vehicle.
    b. Any adjustments are made to the guide wheel equipment.
    c. The load on the vehicle is changed.
    d. Periodically to ensure that the vehicle is tracking properly.

29. The vehicle must be placed on straight, level, tangent track. See Operation Section - Placing Vehicle On Track.

30. Apply spray paint to the flanges an treads of all guide wheels.

31. Lower and lock all guide wheels in the "rail" position.

32. Operate the vehicle for a short distance at a normal operating speed.

33. The paint should wear evenly around the flanges and treads of all guide wheels. If the paint is worn evenly on all guide wheels, the vehicle and guide wheel equipment is properly aligned.

34. If the paint did not wear evenly, note which guide wheels, flange and / or tread the paint is worn on.
    a. Repaint the flanges and treads on all guide wheels.
    b. Operate the vehicle in reverse for a short distance at a normal operating speed.
    c. Note which guide wheels, flange and / or tread the paint is worn on.
    If the paint wore off on the right front flange when traveling forward and then on the left rear flange when traveling in reverse, the vehicle is probably not aligned properly. Have the vehicle frame checked for proper alignment. See Vehicle Check.

35. See Figure 3-9. If the vehicle pulls noticeable to the right when traveling forward, add a shim (4) (part no. 138114) behind the right front outer bearing. Do not use more than two shims on any pivot bearing during the original application of the guide wheel units or three shims on any pivot bearing during field inspection and adjustment.

    If the vehicle pulls noticeable to the left when traveling forward, add a shim (4) (part no. 138114) behind the left front outer bearing. Do not use more than two shims on any pivot bearing during the original application of the guide wheel units or three shims on any pivot bearing during field inspection and adjustment.

36. If the vehicle continues to track improperly, repeat the String Lining and Guide Wheel Alignment Procedure.

Guide Wheel Equipment Adjustment

LOCKING MECHANISM

The spring loaded locking mechanism should move freely so it engages itself when the guide wheel is raised or lowered. Periodically inspect this area for wear. When the vehicle is operated in mud or slush, foreign material may get into the locking mechanism, preventing the lock from operating correctly. Remove this foreign material, being careful not to damage the locking mechanism.

The locking mechanism is secured in the "rail" or "highway" position by a lock pin inserted through the pawl handle and the side plates of the locking mechanism. The lock pin must insert easily in either position.

The button in the lock pin must push in easily and also pop out when released. The locking balls in the end of the pin must work freely so the pin cannot be removed until the button in the lock pin is pushed in. If the lock pin does not operate properly, replace the pin.

There are no adjustments to the locking mechanism.

Guide Wheel Equipment Adjustment

RAIL SWEEP - See Figure 3-12

1. Place the vehicle on straight, level track. Place the automatic transmission in "Park" or manual transmission in "Neutral". Apply the parking brake. Stop the engine.

2. Lower and lock all four guide wheels in the "rail" position, the rail sweeps will lower to the rail position when the guide wheels are lowered.

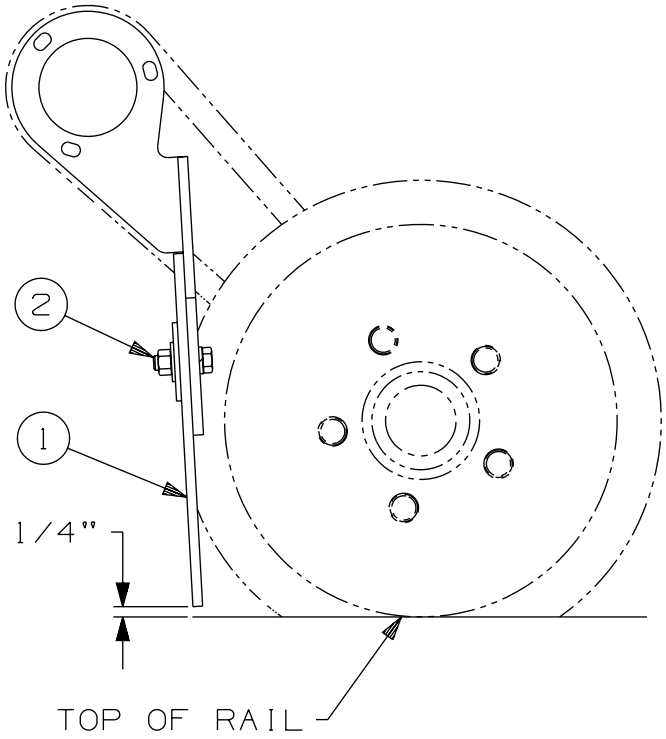
3. The rubber sweep pad (1) should clear the top of the rail by 1/4 inch (6.4 mm). If not, adjustment is necessary.

4. Loosen the two cap screws (2). Slide the rubber sweep (1) down until it clears the top of the rail by 1/4 inch (6.4 mm). Re-tighten the cap screws.

5. If the rubber sweep (1) can not be lowered, remove the two cap screws (2). Relocate the cap screws in the next upper set of holes in the rubber sweep (1). Then adjust the sweep. See Step 4.

6. If the rubber sweep (1) is in the last, upper set of holes and can not be adjusted, replace the rubber sweep.

FIGURE 3-12
RAIL SWEEP



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SECTION 4 - MAINTENANCE
TABLE OF CONTENTS

Maintenance Schedule

■ **RE-TORQUE VEHICLE WHEEL LUG NUTS, WHEEL SPACER LUG NUTS AND GUIDE WHEEL LUG NUTS AFTER FIRST 50 MILES OF OPERATION. THEREAFTER TORQUE WHEEL NUTS ACCORDING TO RECOMMENDED MAINTENANCE SCHEDULE. FAILURE TO HEED THIS WARNING COULD RESULT IN SEVERE BODILY INJURY.**

Daily:

1. Inspect both front and rear rail pilot units for damaged or missing parts.

2. Note the amount of effort required to lower and raise the guide wheels. Effort required should be about the same for each guide wheel. The rear guide wheels, which are locked in the rail position first, should be somewhat easier to lower.

3. Check the locking mechanism for ease of operation. The lock pins should never be able to be pulled out unless the button on the "T" end is pushed in. The button in the lock pin must push in easily and pop out when released. The locking balls in the end of the pin must work freely so the pin cannot be removed until the button in the lock pin is depressed. If the lock pin does not operate properly, replace the lock pin.

4. When the vehicle is operated on the track, listen for unusual noises. Unusual noises may indicate incorrectly lowered guide wheels, or damaged or missing parts. Pay attention to the quality of the ride. Check alignment if the vehicle crowds one side of the track instead of floating from side to side. See Adjustment - Guide Wheel Equipment Alignment Procedure.

Weekly:

1. Check guide wheel equipment alignment. See Adjustments Section, Guide Wheel Equipment Alignment Procedure - Vehicle Track Test.

2. Inspect guide wheel tread and flanges for wear or damage. See Maintenance - Guide Wheel Allowable Wear.

3. Spin each guide wheel by hand, checking for ease of rotation or excessive play. If the guide wheel does not rotate properly, the bearings and spindle may be damaged. Replace the bearing/spindle assembly if necessary.

4. Inspect vehicle wheels, studs, lug nuts and tires for wear, damage, cuts, etc.

5. Check vehicle tires for correct inflation pressure. Operate at the tire manufacturer's recommended maximum pressure printed on the sidewalls of the tires or the wheel manufacturer's recommended maximum pressure stamped on the wheel, whichever is lower.

6. Check rail pilot unit pivot bearings for tightness.

7. Check all bolts for tightness. See Appendices, Appendix A - Bolt Torque Requirements Chart.

Maintenance Schedule

At 50 Vehicle Miles (80 Vehicle km):

1. Torque wheel spacer lug nuts, vehicle wheel lug nuts and guide wheel lug nuts to the recommended specifications. See the decal attached to the vehicle wheel for the recommended wheel bolt torque specifications. Thereafter refer to the wheel manufacturer's wheel torque specifications.

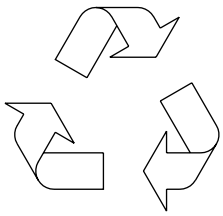
Every 2000 Track Miles (3200 Track km):

1. Lubricate rail pilot unit locations provided with grease fittings. See Lubrication.

2. Lubricate the locking mechanism and other pivot points with light oil or a lubricating spray.

3. Torque guide wheel lug nuts to 90 ft lbs (122 N-m).

Waste Disposal



Dispose of waste properly. Improper disposal of waste can threaten the environment. The operation and maintenance of Harsco Track Technologies equipment may involve the use of such items as hydraulic oil, engine oil, fuel, coolant, brake fluid, filters, batteries, etc.

Use leak proof containers when draining fluids. Do not pour waste onto the ground, down a drain, or into any water source. Inquire on the proper way to recycle or dispose of waste according to applicable Federal, State and/or local regulations.

Rail Pilot Unit Lubrication

Lubricate the guide wheel equipment every 2000 track miles (3200 track km) maximum or each time the vehicle is serviced.

RAIL PILOT UNIT LUBRICATION - See Figure 4-1

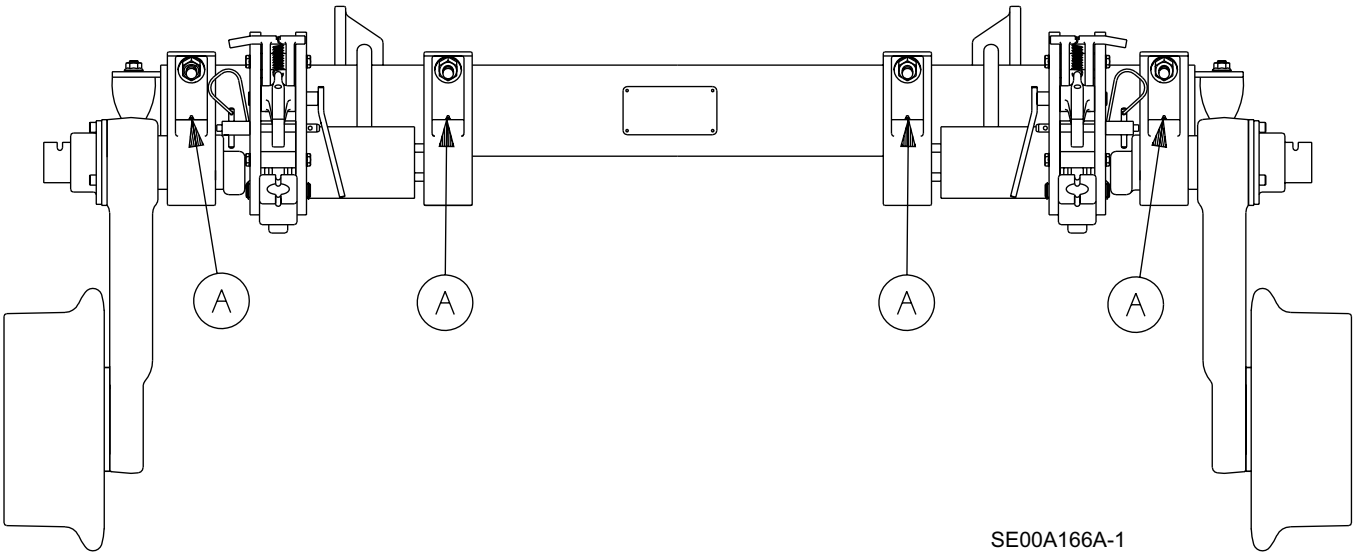
1. Apply the vehicle parking brake. Stop the engine.

2. Lubricate all grease fittings (A) using Mobil Special Moly, or equivalent.

3. Lubricate the locking mechanism and other pivot points with a light weight oil or a lubricating spray.

Note: HR1000 Series A guide wheel equipment utilizes sealed bearings in the guide wheels. Do not re-pack the guide wheel bearings. If the bearings are worn, replace the spindle, hub and bearing assembly.

FIGURE 4-1
RAIL PILOT UNIT LUBRICATION DIAGRAM



Vehicle Wheels

WHEEL REPLACEMENT

■ **USE REPLACEMENT WHEEL(S) AS RECOMMENDED IN THE HARSCO TRACK TECHNOLOGIES HY-RAIL® VEHICLE SPECIFICATIONS MANUAL. FAILURE TO COMPLY COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.**

Use replacement wheel rim(s) as recommended in the Harsco Track Technologies HY-RAIL® Vehicle Specifications Manual to ensure correct vehicle wheel spacing and accurate guide wheel load. The wheels and tires should be static balanced or balanced after installation on the vehicle for the best results. Torque vehicle wheel lug nuts to recommended specifications. See the decal attached to the vehicle wheel for the recommended wheel bolt torque specifications.

TIRE REPLACEMENT

■ **USE REPLACEMENT TIRES WITH THE SAME ROLLING RADIUS, TREAD WIDTH, PLY RATING, AND LOAD RATING AS RECOMMENDED IN THE HARSCO TRACK TECHNOLOGIES HY-RAIL® VEHICLE SPECIFICATIONS MANUAL. FAILURE TO COMPLY COULD RESULT IN BODILY INJURY AND/OR PROPERTY DAMAGE.**

Bias ply tires are the recommended tire for use on vehicles equipped with guide wheel equipment. Radial tires may influence vehicle tracking. Performance of vehicles equipped with radial tires is the responsibility of the end user.

Replacement tires must have the same rolling radius, tread width, ply rating, and load rating as recommended in the Harsco Track Technologies HY-RAIL® Vehicle Specifications Manual. Using tires of equal diameter will help keep the speedometer reading and the guide wheel load accurate. Tires must have a minimum 5-1/2 inches of tread width.

Inflate tires to the tire manufacturer's recommended maximum pressure printed on the sidewalls of the tires or the wheel manufacturer's recommended maximum pressure stamped on the wheel, whichever is lower. The wheels and tires should be static balanced or balanced after installation on the vehicle for the best results. Torque vehicle wheel lug nuts to recommended specifications. See the decal attached to the vehicle wheel for the recommended wheel bolt torque specifications.

After installing new tire(s) on the vehicle, check rail pilot unit wheel arm vertical height and guide wheel load. See the Adjustment Section - Guide Wheel Equipment Alignment Procedure.

Guide Wheels

ALLOWABLE WEAR - 138093 ALUMINUM WHEEL WITH RUBBER TREAD

WARNING

■ **REPLACE ANY GUIDE WHEEL IMMEDIATELY WHICH SHOWS DAMAGE AND/OR HAS WORN MORE THAN THE ALLOWABLE LIMITS. FAILURE TO COMPLY COULD RESULT IN DERAILMENT OF THE VEHICLE, AND SEVERE BODILY INJURY.**

1. Tools needed: Harsco Track Technologies wheel caliper (M019889), or equivalent.

2. See Figure 4-2. Measure the wheel flange at position "A" with the wheel caliper.

   The minimum allowable flange dimension is: Position "A".....1/4 inch (6.4 mm)

   If the wheel flange dimension is less than the allowable limit, replace the wheel immediately.

4

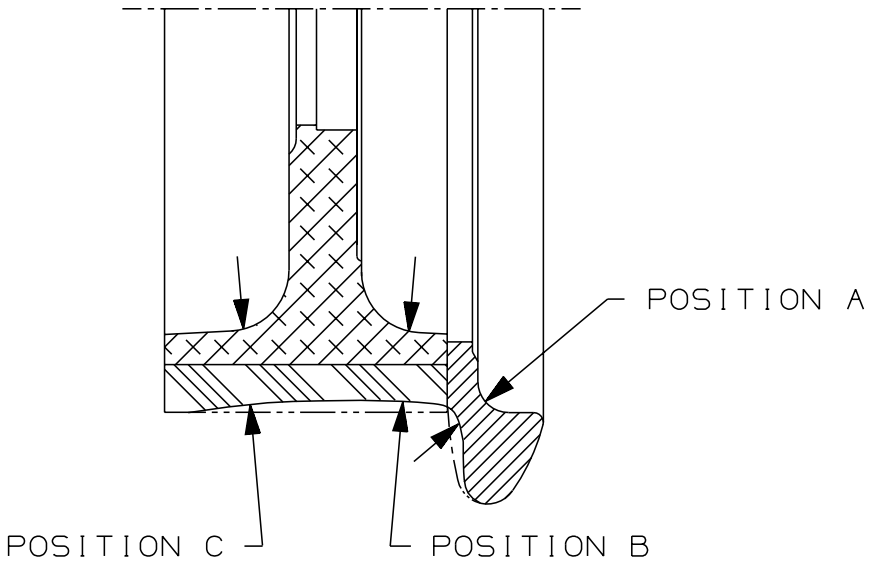
3. See Figure 4-2. Measure the wheel tread at positions "B" and "C" with the wheel caliper.

   The minimum allowable tread dimensions are: Position "B".....11/16 inch (17.5 mm)
   Position "C" .....11/16 inch (17.5 mm)

   If any of the guide wheel tread dimensions are less than the allowable limits, replace the wheel immediately.

4. The rubber tread must not have gouges. The aluminum wheel and/or flange must not have hairline cracks. If any of these are evident, replace the wheel immediately.

FIGURE 4-2
ALLOWABLE WEAR - 138093 ALUMINUM GUIDE WHEEL WITH RUBBER TREAD GROUP



Guide Wheels

ALLOWABLE WEAR - 138113 STEEL GUIDE WHEEL

WARNING

■ **REPLACE ANY GUIDE WHEEL IMMEDIATELY WHICH SHOWS DAMAGE AND/OR HAS WORN MORE THAN THE ALLOWABLE LIMITS. FAILURE TO COMPLY COULD RESULT IN DERAILMENT OF THE VEHICLE, AND SEVERE BODILY INJURY.**

1. Tools needed: Harsco Track Technologies wheel caliper (M019889), or equivalent.

2. See Figure 4-3. Measure the wheel flange at position "A" with the wheel caliper.

   The minimum allowable flange dimension is: Position "A".....1/4 inch (6.4 mm)

   If the wheel flange dimension is less than the allowable limit, replace the wheel immediately.

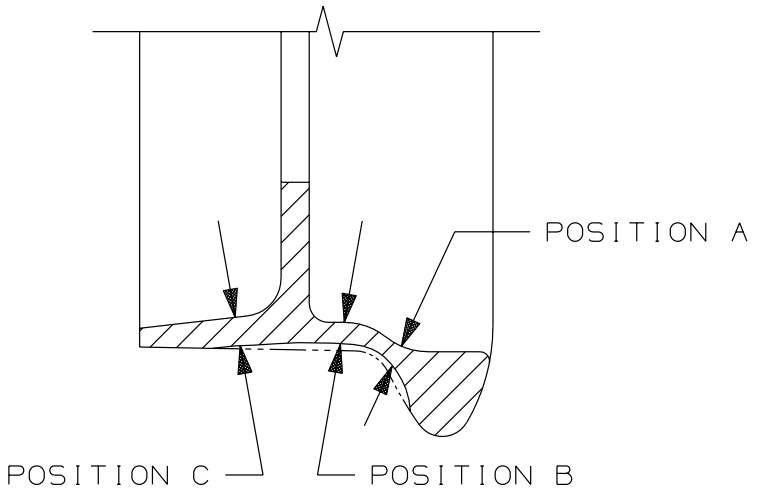
3. See Figure 4-3. Measure the wheel tread at positions "B" and "C" with the wheel caliper.

   The minimum allowable tread dimensions are: Position "B".....1/4 inch (6.4 mm)
   Position "C" .....1/4 inch (6.4 mm)

   If any of the guide wheel tread dimensions are less than the allowable limits, replace the wheel immediately.

4. The entire wheel must not have any gouges or cracks. If any of these are evident, replace the wheel immediately.

FIGURE 4-3
ALLOWABLE WEAR - 138113 STEEL GUIDE WHEEL GROUP



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Guide Wheels

GUIDE WHEEL CHECK

Guide wheels which do not run true on the tread and flange will vibrate and give a rough ride. If the vehicle vibrates and gives a rough ride on track, there may be foreign matter (dirt, rust, paint, etc.) between the wheel and hub, the spindle bearings may be worn, or the tread and flange of the wheel may be worn or damaged, causing a wobbling sensation. On wheels with rubber tread, there may also be foreign matter lodged between the mating surfaces of the steel flange and the aluminum wheel, giving the same sensation.

1. Verify that the five lug nuts are torqued properly to 90 ft lbs (122 N-m). Tighten if necessary.

2. Rubber Guide Wheels Only: Verify that the six 3/8 inch hex flange head cap screws securing flange to the rubber tread wheel are torqued properly to 40 ft lbs (55 N-m).

3. Track test the vehicle to verify whether the vibrations were caused by loose guide wheels or flanges.

   If track testing shows that the vibrations persist, go on to the following steps.

4. Check the spindle bearing by grasping the guide wheel and working it from side to side. If there is excessive play in the spindle, remove the guide wheel and verify that the four 3/8 inch cap screws that secure the spindle to the wheel arm are properly torqued to 31 ft lbs (42 N-m). Re-tighten if necessary.

5. Recheck the spindle bearing by grasping the spindle and working it from side to side. If there is excessive play in the spindle bearing, the bearings are worn. Replace the spindle and hub assembly.

6. Check for foreign material on the mating surfaces of the guide wheel and the hub. Remove any foreign material on these surfaces.

7. Rubber Guide Wheels Only: Remove the flange from the guide wheel and check for foreign material on the mating surfaces of the flange and the guide wheel. Remove any foreign material on these surfaces. Reinstall the flange on the guide wheel and torque the fasteners to 40 ft lbs (55 N-m).

8. Reinstall the guide wheel onto the spindle and hub. Torque wheel nuts to 90 ft lbs (122 N-m).

9. Track test the vehicle to verify whether the vibrations were caused by worn spindle bearings or foreign material between guide wheel/flange mounting surfaces.

   If track testing shows that the vibrations persist, the wheel may be sprung or bent. Replace the wheel.

Locking Mechanism

The spring loaded locking mechanism should move freely so that it engages itself when the guide wheel is raised or lowered. Periodically inspect this area for worn or damaged parts. When the vehicle is operated in muddy or slushy conditions, foreign material may get into the locking mechanism, preventing the lock from operating correctly. Remove this foreign material, being careful not to damage the locking mechanism.

The locking mechanism is secured in the "rail" or "highway" position by a lock pin inserted through the side plates of the locking mechanism. The lock pin must insert easily in either position. The button in the locking pin must push in easily and also pop out when released. The locking balls in the end of the pin must work freely so the pin cannot be removed until the button in the locking pin is pushed in. If the lock pin does not operate properly, replace the pin.

Pivot Bearings

The inner and outer pivot bearings on the rail pilot unit should be checked carefully at weekly intervals for wear. To check the bearings, apply the parking brake. The guide wheels must be raised to the "highway" position.

Insert a pry bar between the cross channel and the pivot. Check for looseness. The pivot bearings are non-adjustable. If the pivot bearings are worn, replace them.

Rubber Cord Replacement

See Adjustment Section, Figure 3-7. If the threaded ends of the turnbuckle are bottomed out against each other or if either rod end is threaded out past the inspection holes in the turnbuckle barrel, it may be necessary to replace the rubber cords in the torque coupling. See Service Data Sheet no. 542

Bolt Torque Requirements

■ **CHECK ALL BOLTS AND NUTS PERIODICALLY, AND KEEP THEM TIGHTENED TO TORQUE SPECIFIED IN APPENDICES SECTION - APPENDIX A. IF BOLT REPLACEMENT BECOMES NECESSARY, REPLACE WORN BOLT WITH EQUAL GRADE BOLT. FAILURE TO COMPLY COULD RESULT IN BODILY INJURY, AND/OR PROPERTY DAMAGE.**

See Appendices Section - Appendix A, for bolt torque requirements table and grade identification markings used by manufacturers.

SECTION 5 - TROUBLESHOOTING
TABLE OF CONTENTS

Troubleshooting Guide Wheel Equipment

Troubleshooting Guide Wheel Equipment

PROBLEM	PROBABLE CAUSE	POSSIBLE REMEDY
Extreme effort required to unlock and lower or raise guide wheels.	Components bent, broken, etc.	Replace components.
	Foreign material (mud, slush, dirt, etc;) in torque coupler.	Clean.
	Pivot bearings are dirty and/or not lubricated.	Disassemble and clean. Lubricate.
Extreme effort required to lock or unlock guide wheels in the "rail" position.	Vehicle incorrectly loaded or overloaded.	Redistribute or remove some of the load.
	Vehicle tires under-inflated.	Check pressure. Inflate if low. Do not exceed tire manufacturer's recommended maximum pressure printed on the sidewalls or wheel manufacturer's recommended maximum pressure stamped on the wheel, whichever is lower.
	Rail pilot unit wheel arm height and/or guide wheel load adjusted incorrectly.	Re-adjust. See Adjustment Section - Guide Wheel Equipment Alignment Procedure.

Troubleshooting Guide Wheel Equipment

PROBLEM	PROBABLE CAUSE	POSSIBLE REMEDY
Minimal effort required to lock or unlock guide wheels in the "rail" position.	Vehicle tires are over-inflated.	Check pressure. If too high, deflate to the tire manufacturer's recommended maximum pressure printed on the sidewalls or wheel manufacturer's recommended maximum pressure, stamped on the wheel, whichever is lower.
	Rail pilot unit wheel arm height and/or guide wheel load adjusted incorrectly.	Re-adjust. See Adjustment Section - Guide Wheel Equipment Alignment Procedure.
Vehicle pulls noticeably to the left or right when on track.	Vehicle loaded heavy on one side.	Move load to center of vehicle.
	Steering lock not engaged.	Engage the steering lock.
	Vehicle wheels not aligned with steering lock when engaged.	Re-align. See Adjustment Section - Guide Wheel Equipment Adjustment Procedure.
	Guide wheels are not aligned with vehicle.	Re-align. See Adjustment Section - Guide Wheel Equipment Alignment Procedure.
	Vehicle front tires out of alignment.	Re-align front tires.
Vehicle derails.	Rail pilot units, vehicle axle(s), etc. not aligned with vehicle frame.	Check alignment. See Adjustment Section - Guide Wheel Equipment Alignment Procedure.

Troubleshooting Guide Wheel Equipment

PROBLEM	PROBABLE CAUSE	POSSIBLE REMEDY
Vibration felt in the vehicle when traveling on track.	Rail pilot unit mounting hardware loose.	Tighten all bolts to recommended torque.
	Guide wheel spindle bearings worn.	Replace bearing/spindle assembly.
	Guide wheel worn or damaged.	Replace guide wheel.
	Rail pilot unit pivot bearings worn.	Check inner and outer pivot bearings. See Maintenance Section - Pivot Bearings.
	Vehicle rim bent.	Replace rim. See Maintenance Section - Vehicle Wheels.
	Vehicle tires out of balance.	Balance tires. See Maintenance Section - Tire Replacement.
	Wheel spacer lug nuts and or vehicle lug nuts loose.	Torque wheel spacer lug nuts and vehicle lug nuts to recommended specifications. See Maintenance Section.
Unusual or excessive noise when traveling on track.	Guide wheel spindle bearings worn.	Replace bearing/spindle assembly.
	Rail pilot unit flanging hard to the right or left.	Re-align. See Adjustment Section - Guide Wheel Equipment Alignment Procedure.

Troubleshooting Guide Wheel Equipment

PROBLEM	PROBABLE CAUSE	POSSIBLE REMEDY
Vibration felt in the vehicle when traveling on road.	Rail pilot unit mounting hardware loose.	Tighten all bolts to recommended torque.
	Guide wheels are not locked and secured in "highway" position.	STOP IMMEDIATELY. Make sure all four guide wheels are locked and secured in "highway" position.
	Guide wheel "highway" set screws are adjusted incorrectly.	Re-adjust. Wheel arms should be tight against rubber bumper on the cross tube. If rubber bumper is worn, replace.
	Vehicle wheel bent.	Replace wheel. See Maintenance Section - Vehicle Wheels.
	Vehicle tires out of balance.	Balance tires. See Maintenance Section - Tire Replacement/Balancing.
	Wheel spacer lug nuts and or vehicle lug nuts loose.	Torque wheel spacer lug nuts and vehicle lug nuts to recommended specifications. See maintenance Section.

Troubleshooting Guide Wheel Equipment

PROBLEM	PROBABLE CAUSE	POSSIBLE REMEDY
Guide wheel "rail" overload set screws bottomed out.	Vehicle incorrectly loaded or overloaded.	Redistribute or remove some of the load.
	Vehicle tires under-inflated.	Check pressure. Inflate if low. Do not exceed tire manufacturer's recommended maximum pressure printed on the sidewalls or wheel manufacturer's recommended maximum pressure stamped on the wheel, whichever is lower.
	Guide wheel arm height and/or guide wheel load adjusted incorrectly.	Re-adjust. See Adjustment Section - Guide Wheel Equipment Alignment Procedure.
	"Rail" overload set screws adjusted incorrectly.	Re-adjust. See Adjustment Section - Guide Wheel Equipment Alignment Procedure.
	Rubber cords in torque coupler worn.	Have rubber cords replaced.
	Foreign material (mud, slush, dirt, etc;) in torque coupler.	Clean.

SECTION 6 - APPENDICES
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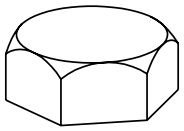
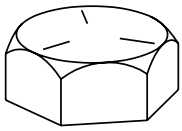
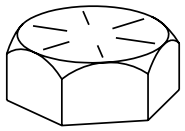
Appendix A - Conversion Tables

Appendix B - Service Data Sheets

Appendix A

FIGURE 6-1
BOLT TORQUE REQUIREMENTS TABLE
STANDARD-TYPE FASTENERS

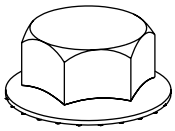
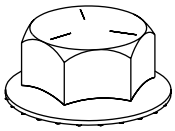
The torque values listed below are for standard-type fasteners only. The torque values listed are based on wet (lubricated) and dry conditions. The torque values for 1/4 and 5/16 inch size fasteners are listed in in-lbs torque only. The torque values for all other size fasteners are listed in ft-lbs torque with metric equivalents in parentheses. Use lower grade torque values if bolt and nut have different SAE grades. Manufacturer's SAE grade markings may vary.

SAE Grade	1 or 2				5				8			
Fastener Standard SAE Grade Markings												
Fastener Body Size	Torque Wet		Dry		Torque Wet		Dry		Torque Wet		Dry	
Inch Thrd	in-lb		in-lb		in-lb		in-lb		in-lb		in-lb	
1/4 - 20	49		65		75		100		107		142	
1/4 - 28	56		74		86		114		122		162	
5/16 - 18	103		137		157		208		220		293	
5/16 - 24	113		150		173		230		244		325	
Fastener Body Size	Torque Wet		Dry		Torque Wet		Dry		Torque Wet		Dry	
Inch Thrd	ft-lb	(kg-m)	ft-lb	(kg-m)	ft-lb	(kg-m)	ft-lb	(kg-m)	ft-lb	(kg-m)	ft-lb	(kg-m)
3/8 - 16	15	(2.1)	20	(2.8)	23	(3.2)	31	(4.2)	32	(4.4)	43	(5.9)
3/8 - 24	17	(2.4)	23	(3.1)	26	(3.6)	35	(4.8)	37	(5.1)	49	(6.8)
7/16 - 14	24	(3.3)	32	(4.4)	37	(5.1)	49	(6.8)	52	(7.2)	69	(9.6)
7/16 - 20	27	(3.7)	36	(5.0)	42	(5.8)	56	(7.7)	58	(8.0)	77	(10.7)
1/2 - 13	39	(5.4)	52	(7.2)	57	(7.9)	76	(10.5)	80	(11.0)	106	(14.7)
1/2 - 20	41	(5.7)	55	(7.5)	64	(8.9)	85	(11.8)	90	(12.4)	120	(16.5)
9/16 - 12	53	(7.3)	71	(9.7)	82	(11.3)	109	(15.1)	115	(15.9)	153	(21.1)
9/16 - 18	59	(8.2)	78	(10.8)	91	(12.6)	121	(16.7)	129	(17.8)	172	(23.7)
5/8 - 11	73	(10.0)	97	(13.4)	113	(15.6)	150	(20.8)	160	(22.1)	213	(29.4)
5/8 - 18	83	(11.5)	110	(15.2)	128	(17.7)	170	(23.5)	180	(24.9)	239	(33.1)
3/4 - 10	129	(17.8)	172	(23.7)	200	(27.7)	266	(36.8)	282	(39.0)	375	(51.8)
3/4 - 16	144	(19.9)	192	(26.5)	223	(30.8)	297	(41.0)	315	(43.6)	419	(57.9)
7/8 - 9	124	(17.1)	165	(22.8)	323	(44.7)	430	(59.4)	454	(62.8)	604	(83.5)
7/8 - 14	138	(19.1)	184	(25.4)	355	(49.1)	472	(65.3)	501	(69.3)	666	(92.1)
1 - 8	188	(26.0)	250	(34.6)	483	(66.8)	642	(88.9)	681	(94.2)	906	(125.2)
1 - 14	210	(29.0)	279	(38.6)	541	(74.8)	720	(99.5)	764	(106.0)	1,016	(140.5)
1-1/8 - 7	266	(36.8)	354	(48.9)	596	(82.4)	793	(109.6)	966	(134.0)	1,285	(177.6)
1-1/8 - 12	297	(41.1)	395	(54.6)	668	(92.4)	888	(122.8)	1,083	(150.0)	1,440	(199.1)
1-1/4 - 7	375	(51.9)	499	(69.0)	841	(116.0)	1,119	(154.6)	1,363	(189.0)	1,813	(250.6)
1-1/4 - 12	415	(57.4)	552	(76.3)	930	(129.0)	1,237	(171.0)	1,509	(209.0)	2,007	(277.5)
1-3/8 - 6	492	(68.0)	654	(90.5)	1,102	(152.0)	1,466	(202.6)	1,787	(247.0)	2,377	(328.6)
1-3/8 - 12	560	(77.4)	745	(103.0)	1,255	(174.0)	1,670	(230.8)	2,034	(281.0)	2,705	(374.0)
1-1/2 - 6	653	(90.3)	868	(120.1)	1,463	(202.0)	1,946	(269.0)	2,371	(328.0)	3,153	(436.0)
1-1/2 - 12	734	(102.0)	976	(135.0)	1,645	(228.0)	2,188	(302.5)	2,668	(369.0)	3,548	(490.6)

Appendix A

FIGURE 6-2
BOLT TORQUE REQUIREMENTS TABLE
SERRATED-TYPE FLANGE FASTENERS

The torque values listed below are for serrated-type flange fasteners only. The torque values listed are based on wet (lubricated) and dry conditions. The torque values for all size fasteners are listed in ft-lbs torque with metric equivalents in parentheses. Use lower grade torque values if bolt and nut have different SAE grades. Manufacturer's SAE grade markings may vary.

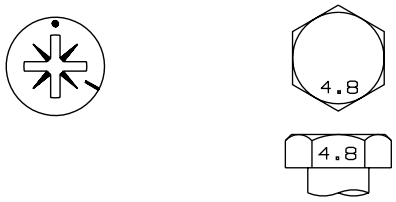
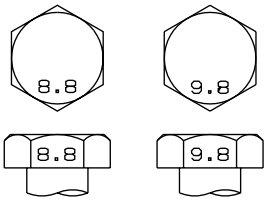
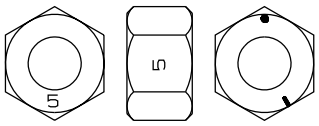
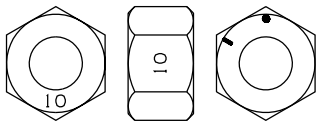
SAE Grade	**1 or 2**				**5**			
Fastener Standard SAE Grade Markings								
Fastener Body Size	**Torque Wet**		**Dry**		**Torque Wet**		**Dry**	
Inch Thrd	ft-lb	(kg-m)	ft-lb	(kg-m)	ft-lb	(kg-m)	ft-lb	(kg-m)
1/4 - 20	8	(1.1)	11	(1.5)	11	(1.5)	15	(2.1)
1/4 - 28	9	(1.2)	12	(1.7)	12	(1.7)	16	(2.2)
5/16 - 18	13	(1.8)	17	(2.4)	20	(2.8)	27	(3.7)
5/16 - 24	13	(1.8)	17	(2.4)	32	(4.4)	43	(5.9)
3/8 - 16	23	(3.2)	31	(4.3)	40	(5.5)	53	(7.3)
3/8 - 24	25	(3.5)	33	(4.6)	43	(5.9)	57	(7.9)
7/16 - 14	38	(5.3)	51	(7.1)	55	(7.6)	73	(10.1)
7/16 - 20	40	(5.5)	53	(7.5)	60	(8.3)	80	(11.1)
1/2 - 13	60	(8.3)	80	(11.1)	95	(13.1)	127	(17.6)
1/2 - 20	65	(9.0)	87	(12.0)	100	(13.8)	133	(18.4)
9/16 - 12	78	(10.8)	104	(14.4)	140	(19.4)	187	(25.9)
9/16 - 18	85	(11.8)	113	(15.6)	150	(20.7)	200	(27.7)
5/8 - 11	125	(17.3)	167	(23.1)	190	(26.3)	253	(35.0)
5/8 - 18	135	(18.7)	180	(24.9)	220	(30.4)	293	(40.5)
3/4 - 10	225	(31.1)	300	(41.2)	350	(48.4)	467	(64.6)
3/4 - 16	250	(34.6)	333	(46.1)	400	(55.3)	533	(73.7)
7/8 - 9	350	(48.4)	467	(64.6)	550	(76.1)	733	(101.4)
7/8 - 14	375	(51.9)	500	(69.2)	600	(83.0)	800	(110.6)
1 - 8	480	(66.4)	640	(88.5)	750	(103.7)	1,000	(138.3)
1 - 14	500	(69.2)	666	(92.1)	800	(110.6)	1,066	(147.4)

Appendix A

FIGURE 6-3
METRIC BOLT AND CAP SCREW TORQUE VALUES

Do not use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically. Fasteners should be replaced with the same or higher property class. If higher property class fasteners are used, these should only be tightened to the strength of the original. Make sure fastener's threads are clean and that thread engagement is properly started. This will help prevent them from failing when tightening.

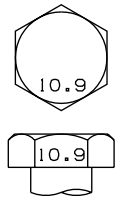
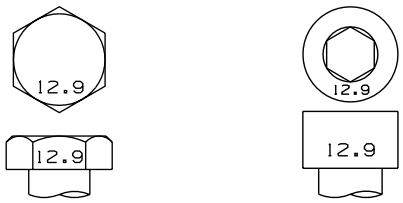
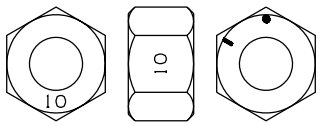
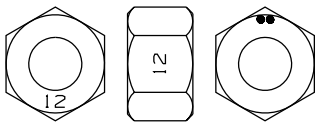
* Lubricated means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. Dry means plain or zinc plated without any lubrication.

Property Class and Head Markings	4.8 	8.8 9.8 
Property Class and Nut Markings	5 	10 

Size	Class 4.8				Class 8.8 or 9.8			
	* Lubricated		* Dry		* Lubricated		* Dry	
	N - m	lb - ft	N - m	lb - ft	N - m	lb - ft	N - m	lb - ft
M 6	4.8	3.5	6	4.5	9	6.5	11	8.5
M 8	12	8.5	15	11	22	16	28	20
M10	23	17	29	21	43	32	55	40
M12	40	29	50	37	75	55	95	70
M14	63	47	80	60	120	88	150	110
M16	100	73	125	92	190	140	240	175
M18	135	100	175	125	260	195	330	250
M20	190	140	240	180	375	275	475	350
M22	260	190	330	250	510	375	650	475
M24	330	250	425	310	650	475	825	600
M27	490	360	625	450	950	700	1200	875
M30	675	490	850	625	1300	950	1650	1200
M33	900	675	1150	850	1750	1300	2200	1650
M36	1150	850	1450	1075	2250	1650	2850	2100

Appendix A

FIGURE 6-4
METRIC BOLT AND CAP SCREW TORQUE VALUES

Property Class and Head Markings	10.9 	12.9 
Property Class and Nut Markings	10 	12 

Size	Class 10.9				Class 12.9			
	* Lubricated		* Dry		* Lubricated		* Dry	
	N - m	lb - ft	N - m	lb - ft	N - m	lb - ft	N - m	lb - ft
M 6	13	9.5	17	12	15	11.5	19	14.5
M 8	32	24	40	30	37	28	47	35
M10	63	47	80	60	75	55	95	70
M12	110	80	140	105	130	95	165	120
M14	175	130	225	165	205	150	260	190
M16	275	200	350	255	320	240	400	300
M18	375	275	475	350	440	325	560	410
M20	530	400	675	500	625	460	800	580
M22	725	540	925	675	850	625	1075	800
M24	925	675	1150	850	1075	800	1350	1000
M27	1350	1000	1700	1250	1600	1150	2000	1500
M30	1850	1350	2300	1700	2150	1600	2700	2000
M33	2500	1850	3150	2350	2900	2150	3700	2750
M36	3200	2350	4050	3000	3750	2750	4750	3500

Appendix A

FIGURE 6-5
INCH TO MILLIMETER CONVERSION TABLE
1 INCH = 25.4 MILLIMETERS

FRACTIONS	DECIMALS	MILLIMETERS	FRACTIONS	DECIMALS	MILLIMETERS
1/64	.016	0.397	33/64	.516	13.097
1/32	.031	0.794	17/32	.531	13.494
3/64	.047	1.191	35/64	.547	13.891
1/16	.063	1.588	9/16	.563	14.288
5/64	.078	1.984	37/64	.578	14.684
3/32	.094	2.381	19/32	.594	15.081
7/64	.109	2.778	39/64	.609	15.478
1/8	.125	3.175	5/8	.625	15.875
9/64	.141	3.572	41/64	.641	16.272
5/32	.156	3.969	21/32	.656	16.669
11/64	.172	4.366	43/64	.672	17.066
3/16	.188	4.763	11/16	.688	17.463
13/64	.203	5.159	45/64	.703	17.859
7/32	.219	5.556	23/32	.719	18.256
15/64	.234	5.953	47/64	.734	18.653
1/4	.250	6.350	3/4	.750	19.050
17/64	.266	6.747	49/64	.766	19.447
9/32	.281	7.144	25/32	.781	19.844
19/64	.297	7.541	51/64	.797	20.241
5/16	.313	7.938	13/16	.813	20.638
21/64	.328	8.334	53/64	.828	21.034
11/32	.344	8.731	27/32	.844	21.431
23/64	.359	9.128	55/64	.859	21.828
3/8	.375	9.525	7/8	.875	22.225
25/64	.391	9.922	57/64	.891	22.622
13/32	.406	10.319	29/32	.906	23.019
27/64	.422	10.716	59/64	.922	23.416
7/16	.438	11.113	15/16	.938	23.813
29/64	.453	11.509	61/64	.953	24.209
15/32	.469	11.906	31/32	.969	24.606
31/64	.484	12.303	63/64	.984	25.003
1/2	.500	12.700	1	1.000	25.400

FIGURE 6-6
FEET TO METERS CONVERSION TABLE
1 FOOT = 0.3048 METER

FEET	METERS	FEET	METERS	FEET	METERS	FEET	METERS	FEET	METERS
100	30.480	10	3.048	1	0.305	0.1	0.030	0.01	0.003
200	60.960	20	6.096	2	0.610	0.2	0.061	0.02	0.006
300	91.440	30	9.144	3	0.914	0.3	0.091	0.03	0.009
400	121.920	40	12.192	4	1.219	0.4	0.122	0.04	0.012
500	152.400	50	15.240	5	1.524	0.5	0.152	0.05	0.015
600	182.880	60	18.288	6	1.829	0.6	0.183	0.06	0.018
700	213.360	70	21.336	7	2.134	0.7	0.213	0.07	0.021
800	243.840	80	24.384	8	2.438	0.8	0.244	0.08	0.024
900	274.320	90	27.432	9	2.743	0.9	0.274	0.09	0.027
1,000	304.800	100	30.480	10	3.048	1.0	0.305	0.10	0.030

Appendix A

FIGURE 6-7
POUNDS TO KILOGRAMS CONVERSION TABLE
1 POUND = 0.4536 KILOGRAM

LB	KG	LB	KG	LB	KG	LB	KG	LB	KG
1,000	453.59	100	45.36	10	4.54	1	0.45	0.1	0.05
2,000	907.18	200	90.72	20	9.07	2	0.91	0.2	0.09
3,000	1,360.78	300	136.08	30	13.61	3	1.36	0.3	0.14
4,000	1,814.37	400	181.44	40	18.14	4	1.81	0.4	0.18
5,000	2,267.96	500	226.80	50	22.68	5	2.27	0.5	0.23
6,000	2,721.55	600	272.16	60	27.22	6	2.72	0.6	0.27
7,000	3,175.15	700	317.51	70	31.75	7	3.18	0.7	0.32
8,000	3,628.74	800	362.87	80	36.29	8	3.63	0.8	0.36
9,000	4,082.33	900	408.23	90	40.82	9	4.08	0.9	0.41
10,000	4,535.92	1,000	453.59	100	45.36	10	4.54	1.0	0.45

FIGURE 6-8
POUNDS PER SQUARE INCH TO BAR CONVERSION TABLE
1 PSI = 0.06895 BAR

PSI	BAR	PSI	BAR	PSI	BAR	PSI	BAR
1,000	68.95	100	6.90	10	0.69	1	0.07
2,000	137.90	200	13.79	20	1.38	2	0.14
3,000	206.84	300	20.68	30	2.07	3	0.21
4,000	275.80	400	27.58	40	2.76	4	0.28
5,000	344.70	500	34.47	50	3.45	5	0.35
6,000	413.64	600	41.36	60	4.14	6	0.41
7,000	482.58	700	48.26	70	4.83	7	0.48
8,000	551.52	800	55.15	80	5.52	8	0.55
9,000	620.46	900	62.05	90	6.21	9	0.62
10,000	689.48	1,000	68.95	100	6.90	10	0.69

FIGURE 6-9
POUNDS PER SQUARE INCH TO
KILOPASCALS CONVERSION TABLE
1 PSI = 6.895 kPa

PSI	kPa	PSI	kPa
10	68.95	1	6.90
20	137.90	2	13.79
30	206.84	3	20.68
40	275.80	4	27.58
50	344.70	5	34.47
60	413.64	6	41.36
70	482.58	7	48.26
80	551.52	8	55.15
90	620.46	9	62.05
100	689.48	10	68.95

Appendix A

FIGURE 6-10
FAHRENHEIT TO CELSIUS (Centigrade) CONVERSION TABLE
°F MINUS 32, DIVIDED BY 1.8 EQUALS °C

°F	°C	°F	°C	°F	°C	°F	°C
1	-17.2	51	10.6	101	38.3	151	66.1
2	-16.7	52	11.1	102	38.9	152	66.7
3	-16.1	53	11.7	103	39.4	153	67.2
4	-15.6	54	12.2	104	40.0	154	67.8
5	-15.0	55	12.8	105	40.6	155	68.3
6	-14.4	56	13.3	106	41.1	156	68.9
7	-13.9	57	13.9	107	41.7	157	69.4
8	-13.3	58	14.4	108	42.2	158	70.0
9	-12.8	59	15.0	109	42.8	159	70.6
10	-12.2	60	15.6	110	43.3	160	71.1
11	-11.7	61	16.1	111	43.9	161	71.7
12	-11.1	62	16.7	112	44.4	162	72.2
13	-10.6	63	17.2	113	45.0	163	72.8
14	-10.0	64	17.8	114	45.6	164	73.3
15	- 9.4	65	18.3	115	46.1	165	73.9
16	- 8.9	66	18.9	116	46.7	166	74.4
17	- 8.3	67	19.4	117	47.2	167	75.0
18	- 7.8	68	20.0	118	47.8	168	75.6
19	- 7.2	69	20.6	119	48.3	169	76.1
20	- 6.7	70	21.1	120	48.9	170	76.7
21	- 6.1	71	21.7	121	49.4	171	77.2
22	- 5.6	72	22.2	122	50.0	172	77.8
23	- 5.0	73	22.8	123	50.6	173	78.3
24	- 4.4	74	23.3	124	51.1	174	78.9
25	- 3.9	75	23.9	125	51.7	175	79.4
26	- 3.3	76	24.4	126	52.2	176	80.0
27	- 2.8	77	25.0	127	52.8	177	80.6
28	- 2.2	78	25.6	128	53.3	178	81.1
29	- 1.7	79	26.1	129	53.9	179	81.7
30	- 1.1	80	26.7	130	54.4	180	82.2
31	- 0.6	81	27.2	131	55.0	181	82.8
32	0.0	82	27.8	132	55.6	182	83.3
33	0.6	83	28.3	133	56.1	183	83.9
34	1.1	84	28.9	134	56.7	184	84.4
35	1.7	85	29.4	135	57.2	185	85.0
36	2.2	86	30.0	136	57.8	186	85.6
37	2.7	87	30.6	137	58.3	187	86.1
38	3.3	88	31.1	138	58.9	188	86.7
39	3.9	89	31.7	139	59.4	189	87.2
40	4.4	90	32.2	140	60.0	190	87.8
41	5.0	91	32.8	141	60.6	191	88.3
42	5.6	92	33.3	142	61.1	192	88.9
43	6.1	93	33.9	143	61.7	193	89.4
44	6.7	94	34.4	144	62.2	194	90.0
45	7.2	95	35.0	145	62.8	195	90.6
46	7.8	96	35.6	146	63.3	196	91.1
47	8.3	97	36.1	147	63.9	197	91.7
48	8.9	98	36.7	148	64.4	198	92.2
49	9.4	99	37.2	149	65.0	199	92.8
50	10.0	100	37.8	150	65.6	200	93.3

Appendix A

FIGURE 6-11
MILES PER HOUR TO KILOMETERS PER HOUR
CONVERSION TABLE
1 MPH = 1.609 KM/H

MPH	KM/H	MPH	KM/H	MPH	KM/H
10	16.09	1	1.61	0.1	0.16
20	32.19	2	3.22	0.2	0.32
30	48.28	3	4.83	0.3	0.48
40	64.37	4	6.44	0.4	0.64
50	80.47	5	8.05	0.5	0.80
60	96.56	6	9.66	0.6	0.97
70	112.65	7	11.27	0.7	1.13
80	128.75	8	12.87	0.8	1.29
90	144.84	9	14.48	0.9	1.45
100	160.93	10	16.09	1.0	1.61

FIGURE 6-12
U.S. GALLONS TO LITERS CONVERSION TABLE
1 U.S. GALLON = 3.785 LITERS

GAL	LITER	GAL	LITER	GAL	LITER	GAL	LITER
100	378.54	10	37.85	1	3.79	0.1	0.38
200	757.08	20	75.71	2	7.57	0.2	0.76
300	1,135.62	30	113.56	3	11.36	0.3	1.14
400	1,514.16	40	151.42	4	15.14	0.4	1.51
500	1,892.71	50	189.27	5	18.93	0.5	1.89
600	2,271.25	60	227.12	6	22.71	0.6	2.27
700	2,649.79	70	264.98	7	26.50	0.7	2.65
800	3,028.33	80	302.83	8	30.28	0.8	3.03
900	3,406.87	90	340.69	9	34.07	0.9	3.41
1,000	3,785.41	100	378.54	10	37.85	1.0	3.79

SECTION 7 - PARTS
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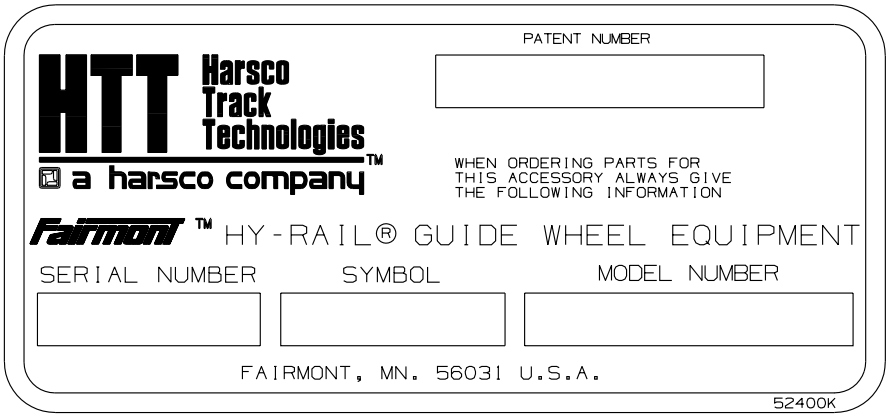
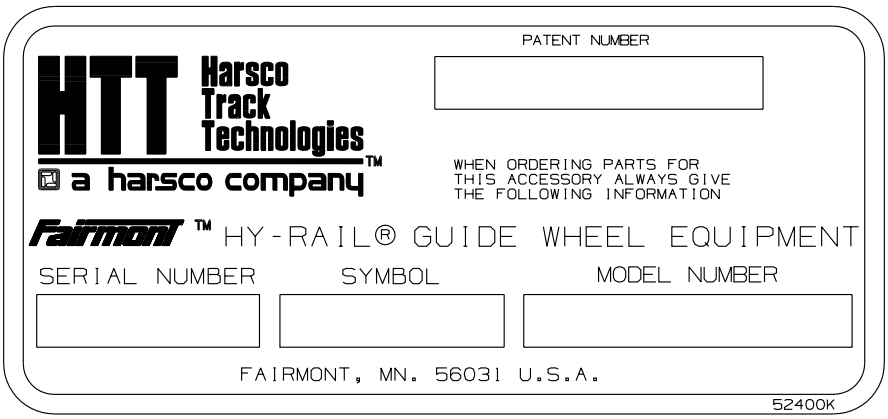
Serial Numbers

When this bulletin is received, fill in the spaces provided below using the information from the serial number tags on both the front and rear rail pilot units. Always provide these factory serial numbers when calling or writing about the units. The serial number tags are located on the cross channel on both units.

FRONT RAIL PILOT UNIT SERIAL NUMBER TAG



REAR RAIL PILOT UNIT SERIAL NUMBER TAG



Instructions For Ordering Parts

1. See Section 8 for the Vehicle Application charts.

2. Find the chart for the make, model and year of the vehicle that the unit is mounted on.

3. Each application consists of required groups, optional groups required and accessory group options. These are the group numbers that were supplied with, or that were available for the unit.

4. Locate the appropriate group numbers in the Parts Section to find the individual parts required.

5. Front - rear and left - right are determined from the operator's position.

6. Assemblies: Items listed in CAPITALS are assemblies which include all parts listed immediately following and with the part description indented to the right. When assemblies can be used, always order them to save work of fitting separate parts.

7. For convenience in ordering, parts are listed by item number, part number, description, and quantity in each assembly or group. If in doubt as to any part wanted, send full description, sketch, or send the old part with the order.

8. To insure prompt and correct shipment of parts on orders, always give:

    1. Quantity of each part wanted.
    2. Part number of each part as shown in this book. Include any prefix and suffix letters.
    3. Description of each part as shown in this book.
    4. Factory serial numbers from the serial number tag.
    5. Purchase order number (if required).
    6. Preferred method of shipment.

9. All parts are shipped F.O.B. factory, transportation charges to be paid by customer. Terms to be determined by the Credit Department.

Limited Warranty

HARSCO TRACK TECHNOLOGIES™ products are designed to give high quality service and are manufactured from high grade material, by competent workmen under careful supervision. Harsco Track Technologies, Harsco Corporation warrants products of its manufacture to be free of defects in material and workmanship, under normal use and service for a period of six (6) months from date of delivery to the original user. The obligation of Harsco Track Technologies, Harsco Corporation under this warranty is limited to repairing or replacing at its factories, or other location designated by it, any part or parts thereof which are returned within 30 days of the date when failure occurs or defect is noted, with transportation charges prepaid, and which upon examination appears to the satisfaction of Harsco Track Technologies, Harsco Corporation to have been defective. Such free repair or replacement does not include transportation charges, or the cost of installing the new part or any other expense incident thereto. Harsco Track Technologies, Harsco Corporation will not be liable for other loss, damage, or expense directly or indirectly arising from the use of its products, nor will Harsco Track Technologies, Harsco Corporation be liable for special, incidental or consequential damages.

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Hazardous Material Disclaimer

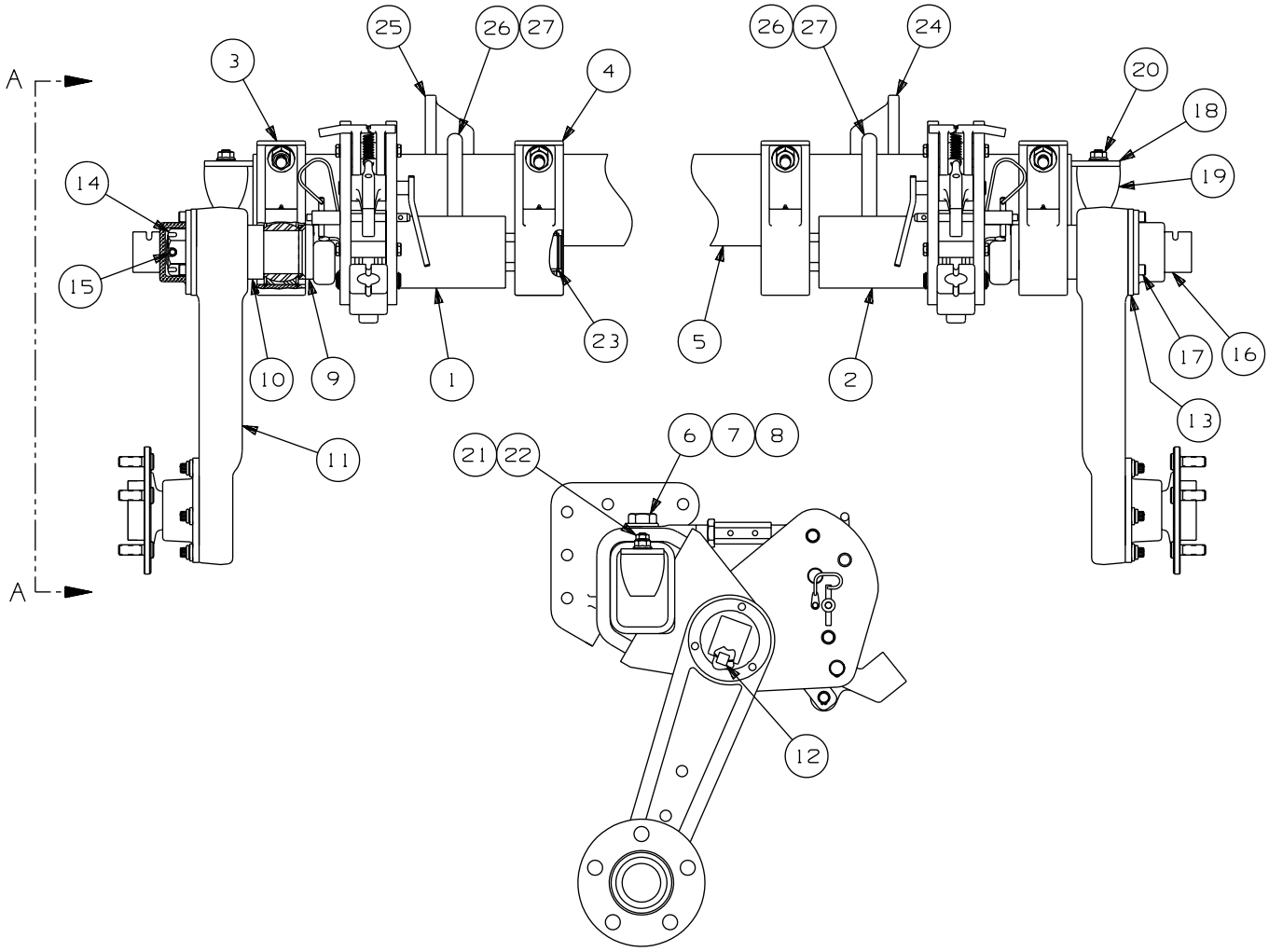
THE PARTS/ASSEMBLIES THAT ARE USED IN THIS PRODUCT ARE CLASSIFIED AS "ARTICLES" ACCORDING TO 29 CFR 1910.1200 (C). THEY ARE FORMED TO A SPECIFIC SHAPE OR DESIGN DURING MANUFACTURE, HAVE END USE FUNCTION DEPENDENT UPON THEIR SHAPE OR DESIGN, AND DO NOT RELEASE ANY HAZARDOUS CHEMICAL UNDER NORMAL CONDITIONS OF USE. ACCORDINGLY, WE ARE NOT REQUIRED TO SUPPLY MATERIAL SAFETY DATA SHEETS (MSDS) OR TO LABEL SHIPPING CONTAINERS FOR "ARTICLES". HOWEVER, LUBRICANTS, LIQUIDS, GASEOUS CHEMICALS AND SOLIDS USED IN OPERATION OR MAINTENANCE OF THE PRODUCT MAY REQUIRE THAT USER'S TAKE OCCUPATIONAL PROTECTIVE MEASURES. MSDS SHEETS FOR SUCH MATERIALS WILL BE SUPPLIED TO YOUR PURCHASING MANAGER/SAFETY DIRECTOR TO BE USED IN YOUR EMPLOYEE SAFETY TRAINING EDUCATION AND ENVIRONMENTAL HEALTH TRAINING.

164558 UNIVERSAL RAIL PILOT UNIT

Not Illustrated

PART NO	DESCRIPTION	QTY
138090	Rail Pilot Unit Assembly (see separate breakdown)	2
138114	Bearing Shim, 1/16" (use as required for wheel alignment)	6
073527	Wheel Weighing Jack	1
137694	Hand Lever	1
F012866	Hex Allen Wrench, 1/4"	1
F003032	Hex Allen Wrench, 5/32"	1
M006738	Tool Bag	1
138092	Decal, Operating Instructions	1
140220	Decal, Warning - Do Not Operate This Machine Before...	3
F018082	Decal, Safety Instructions - Lock Front Wheels...	1
F018084	Decal, Operation	1
155007	Decal, HY-RAIL® Vehicle Completed By...	1
162058	Decal, Warning - ...Supplied Lift Handles...	1

138090 RAIL PILOT UNIT



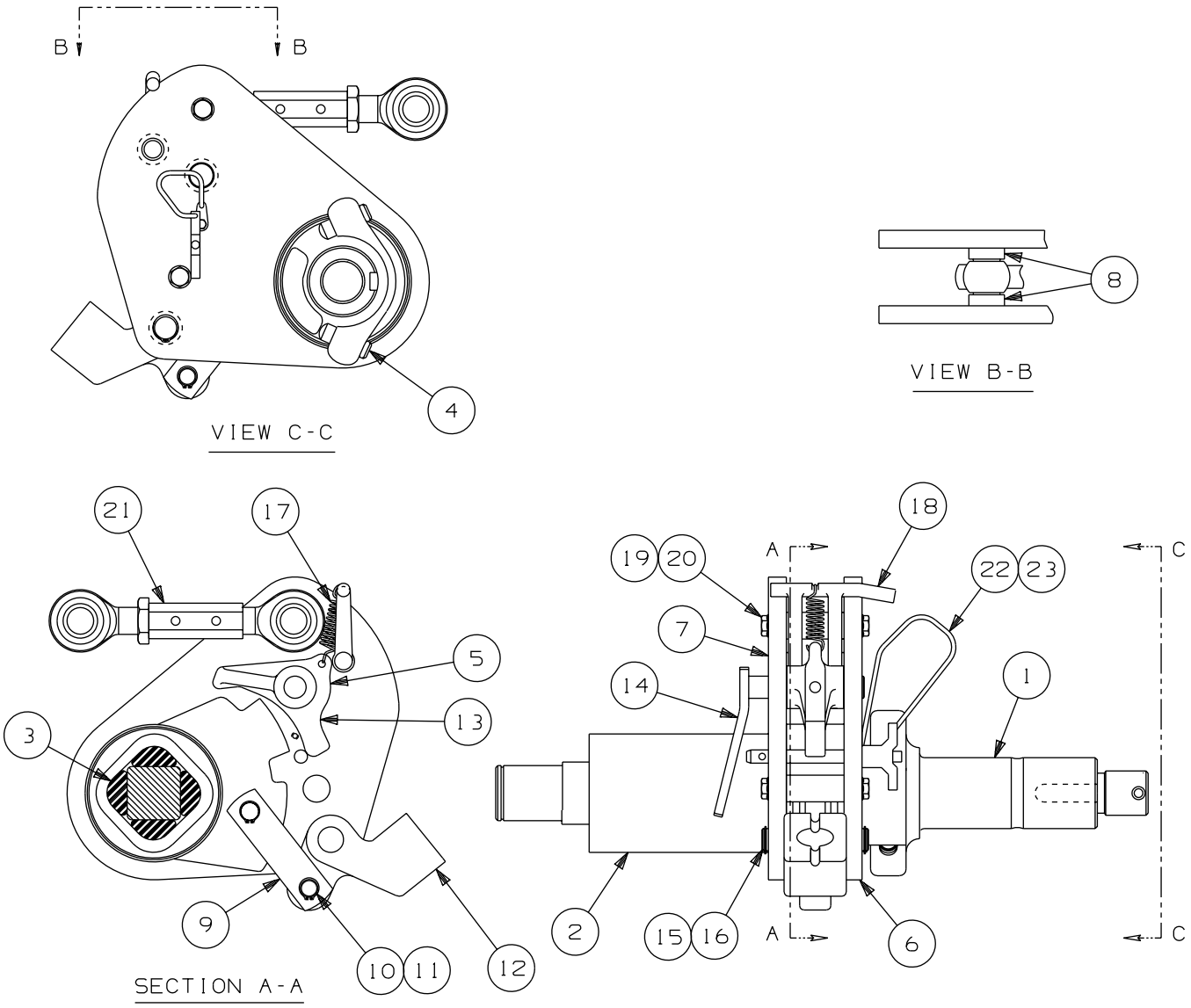
VIEW A-A

SE138090A-1

138090 RAIL PILOT UNIT

ITEM	PART NO	DESCRIPTION	QTY
1	138095	Coupling And Shaft Assembly, LF/RR (see separate breakdown)	1
2	137907	Coupling And Shaft Assembly, RF/LR (see separate breakdown)	1
3	171783	OUTER PIVOT BEARING	2
3a	136048	Outer Race	1
3b	136291	Bearing	1
3c	F023370	Retaining Ring	2
3d	F008014	Grease Fitting	1
3e	136018	Mounting Bolt	1
3f	F023374	Hex Flg Nut, 5/8"-18 GR 5	2
4	171784	INNER PIVOT BEARING	2
4a	136048	Outer Race	1
4b	136292	Bearing	1
4c	F023370	Retaining Ring	2
4d	F008014	Grease Fitting	1
4e	136018	Mounting Bolt	1
4f	F023374	Hex Flg Nut, 5/8"-18 GR 5	2
5	136026	Cross Tube	1
6	F020458	Cap Screw, 3/4-10 x 2-1/2" GR 8 Hex Hd	2
7	F021137	Hardened Washer	4
8	F023375	Hex Flg Nut, 3/4"-10 GR 8	2
9	136028	Spacer	2
10	138089	Spacer	2
11	171782	WHEEL ARM AND SPINDLE ASSEMBLY	2
11a	136296K	Wheel Arm	1
11b	F023021	Integral Spindle	1
11c	F023372	Cap Screw, 7/16-14 x 1-1/14" GR 8 12 Pt Flg Hd	4
11d	F001291	SAE Lock Washer, 7/16"	4
12	137688	Key	2
13	137685	Washer	2
14	F024406	Hex Slotted Nut, 1-1/4"-7	2
15	F013955	Spring Pin, 1/4 x 2"	2
16	136014	Cap / Socket	2
17	F010901	Cap Screw, 5/16-18 x 1-1/4" Soc Hd	6
18	136138	Bracket	2
19	F011732	Rubber Bumper	2
20	F023378	Hex Flg Nut, 3/8"-24 GR 5	2
21	F001099	Cap Screw, 5/16-18 x 1" Hex Hd	4
22	F040088	Hex Flg Nut, 5/16"-18 GR 5	4
23	F016475	Retaining Ring	2
24	136011	Bracket	1
25	136034	Bracket	1
26	136018	Bolt	2
27	F023374	Hex Flg Nut, 5/8"-18 GR 5	4
28	162058	Decal, Warning - ...Supplied Lift Handles...(not illustrated)	2

138095 COUPLING AND SHAFT ASSEMBLY - LF/RR

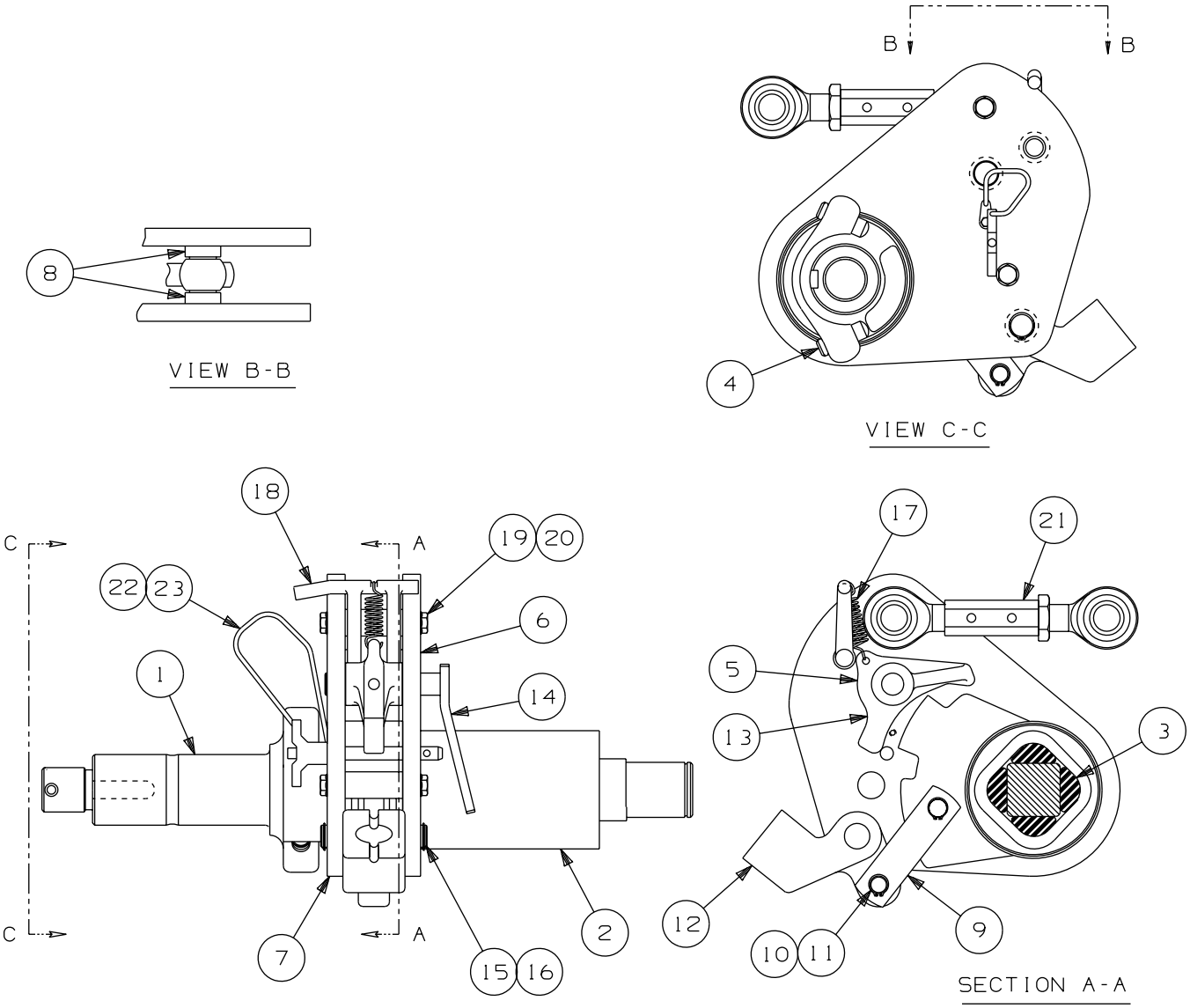


SE138095A-1

138095 COUPLING AND SHAFT ASSEMBLY - LF/RR

ITEM	PART NO	DESCRIPTION	QTY
1	136009	Torque Shaft	1
2	136010	Torque Coupling	1
3	136262	Rubber Cord	4
4	F012772	Set Screw, 1/2-13 x 1-1/2" Oval Point Locking	2
5	F018272	Set Screw, 5/16-18 x 3/4" Cup Point	1
6	138079	Lock Plate, Outer (see separate breakdown)	1
7	140119	Lock Plate, Inner (see separate breakdown)	1
8	138118	Spacer	2
9	137915	Link	2
10	137687	Pin	2
11	F009169K	Retaining Ring	4
12	136025	Socket	1
13	136013	Latch	1
14	138412	Lever / Pin	1
15	137686	Pin	1
16	F009288K	Retaining Ring	2
17	F023361	Extension Spring	1
18	136015	Spring Guide	1
19	136027	Standoff	2
20	F040090	Cap Screw, 5/16-18 x 3/4" GR 5 Hex Flg Hd	4
21	137874	Link Assembly	1
22	083105K1	Lockpin And Lanyard	1
23	F023158	Machine Screw, #10-24 x 3/8" Hex Flg Hd	1

137907 COUPLING AND SHAFT ASSEMBLY - RF/LR

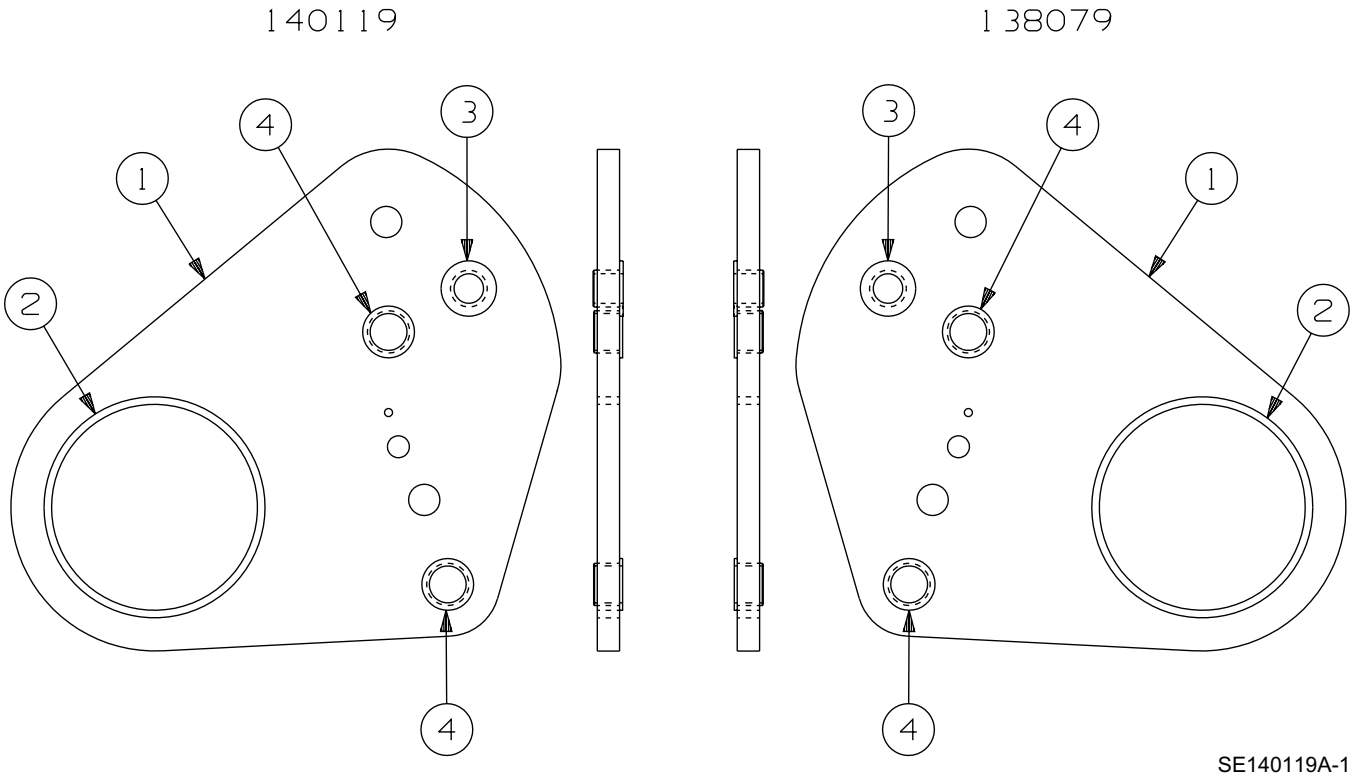


SE137907A-1

137907 COUPLING AND SHAFT ASSEMBLY - RF/LR

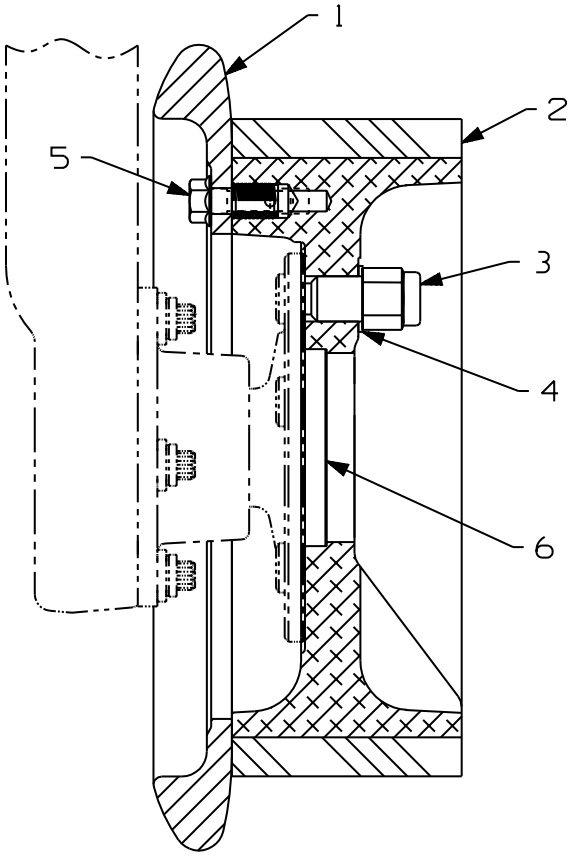
ITEM	PART NO	DESCRIPTION	QTY
1	136009	Torque Shaft	1
2	136030	Torque Coupling	1
3	136262	Rubber Cord	4
4	F012772	Set Screw, 1/2-13 x 1-1/2" Oval Point Locking	2
5	F018272	Set Screw, 5/16-18 x 3/4" Cup Point	1
6	138079	Lock Plate, Inner (see separate breakdown)	1
7	140119	Lock Plate, Outer (see separate breakdown)	1
8	138118	Spacer	2
9	137915	Link	2
10	137687	Pin	2
11	F009169K	Retaining Ring	4
12	136025	Socket	1
13	136013	Latch	1
14	138412	Lever / Pin	1
15	137686	Pin	1
16	F009288K	Retaining Ring	2
17	F023361	Extension Spring	1
18	136015	Spring Guide	1
19	136027	Standoff	2
20	F040090	Cap Screw, 5/16-18 x 3/4" GR 5 Hex Flg Hd	4
21	137874	Link Assembly	1
22	083105K1	Lockpin And Lanyard	1
23	F023158	Machine Screw, #10-24 x 3/8" Hex Flg Hd	1

138079 AND 140119 LOCK PLATE ASSEMBLIES



ITEM	PART NO	DESCRIPTION	QTY
	138079	LOCK PLATE ASSEMBLY	1
	140119	LOCK PLATE ASSEMBLY	1
1	136023	Lock Plate	1
2	F023323	Bearing	1
3	F023275	Flange Bearing	1
4	F023274	Flange Bearing	2

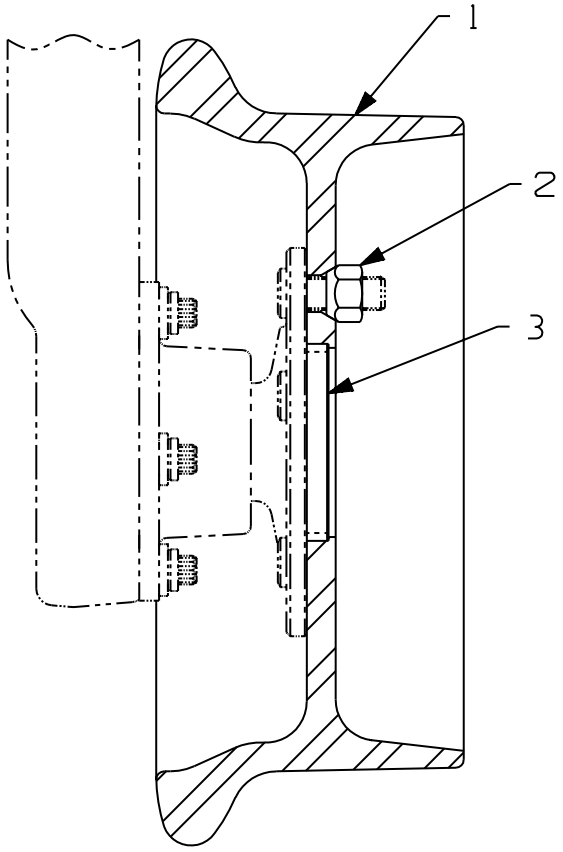
138093 RUBBER TREAD GROUP



SE020083A-1

ITEM	PART NO	DESCRIPTION	QTY
	138093	RUBBER TREAD GROUP	1
1	136133	Flange	1
2	137683	Rubber Tread	1
3	F023472	Lug Nut, M12 x 1.5	5
4	F023457	Washer, 11/16"	5
5	F023255	Cap Screw, 3/8-16 x 1" Hex Flg Hd	6
6	123795	Tube	1

138113 STEEL TREAD GROUP



SE020084A-1

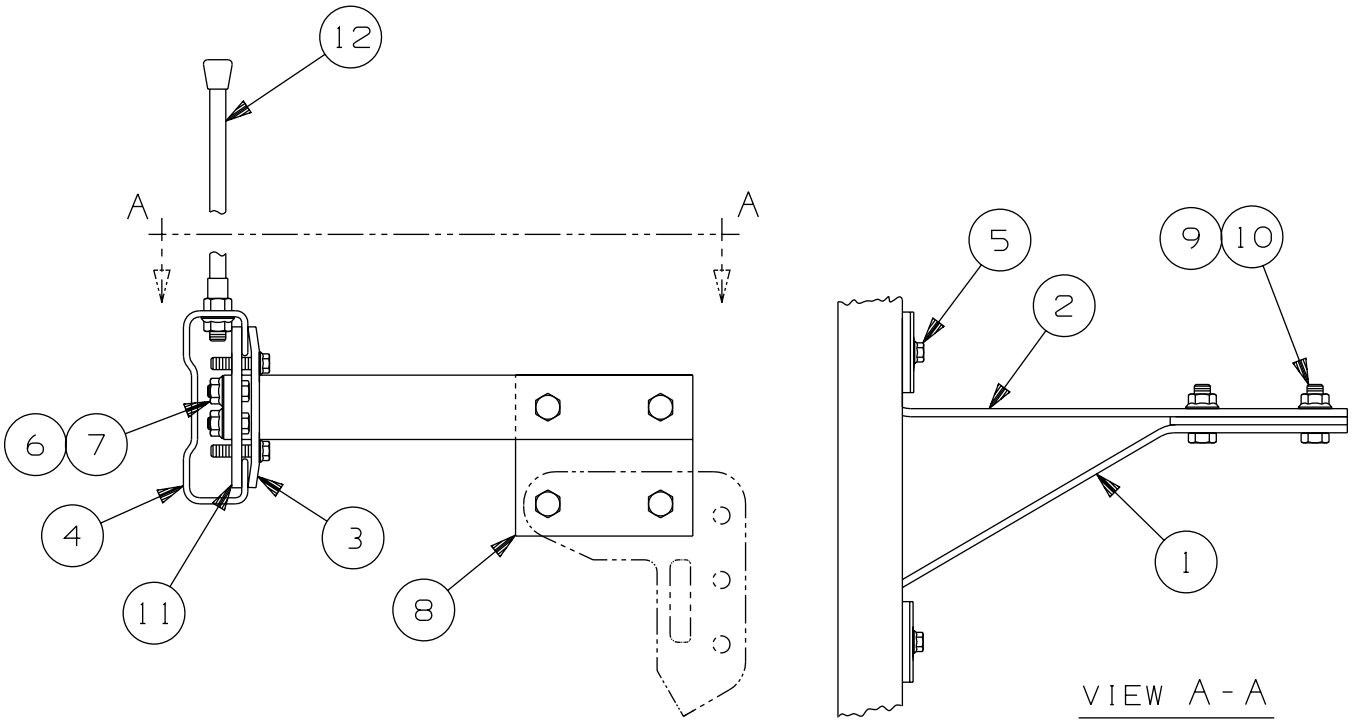
ITEM	PART NO	DESCRIPTION	QTY
	138113	STEEL TREAD GROUP	1
1	136297	Steel Tread	1
2	F019949K	Hex Cone Nut, M12 x 1.5	5
3	123795	Tube	1

7

STEERING LOCK GROUPS

Individual steering lock components are not available as repair parts. Steering lock groups are sold as complete replacement groups only. See vehicle application charts to find the correct steering lock group applicable to your make, model and year of vehicle.

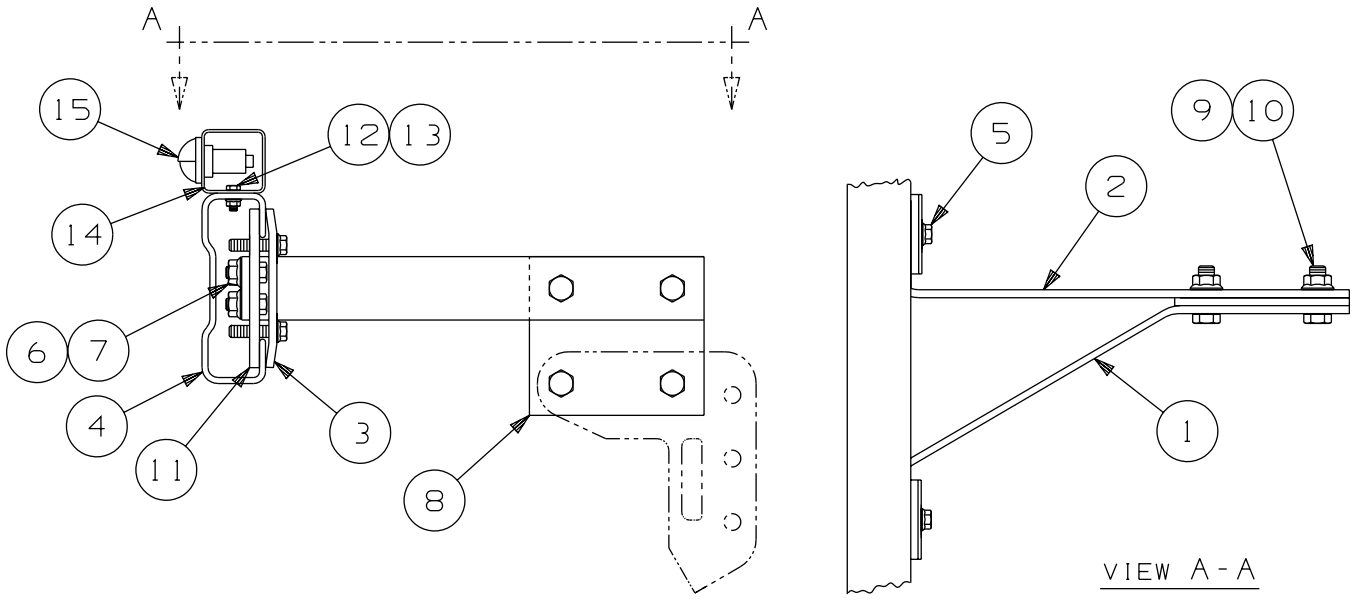
136033 BUMPER GROUP - FRONT



SE020077A-1

ITEM	PART NO	DESCRIPTION	QTY
	136033	BUMPER GROUP - FRONT	1
1	136021	Support	2
2	136020	Bracket	2
3	136032	Plate	4
4	138111	Bumper	1
5	F023417	Cap Screw, 3/8-16 x 1-1/2" GR 5 Hex Flg Hd	8
6	F001007	Cap Screw, 3/8-16 x 1" GR 5 Hex Hd.	8
7	F023225	Hex Flg Nut, 3/8"-16 GR 5	8
8	138097	Plate	2
9	F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	8
10	F022037	Hex Flg Nut, 1/2"-13 GR 5	8
11	136031	Bar	4
12	132981	Sight Rod Kit (includes two sight rods and mounting hardware)	1

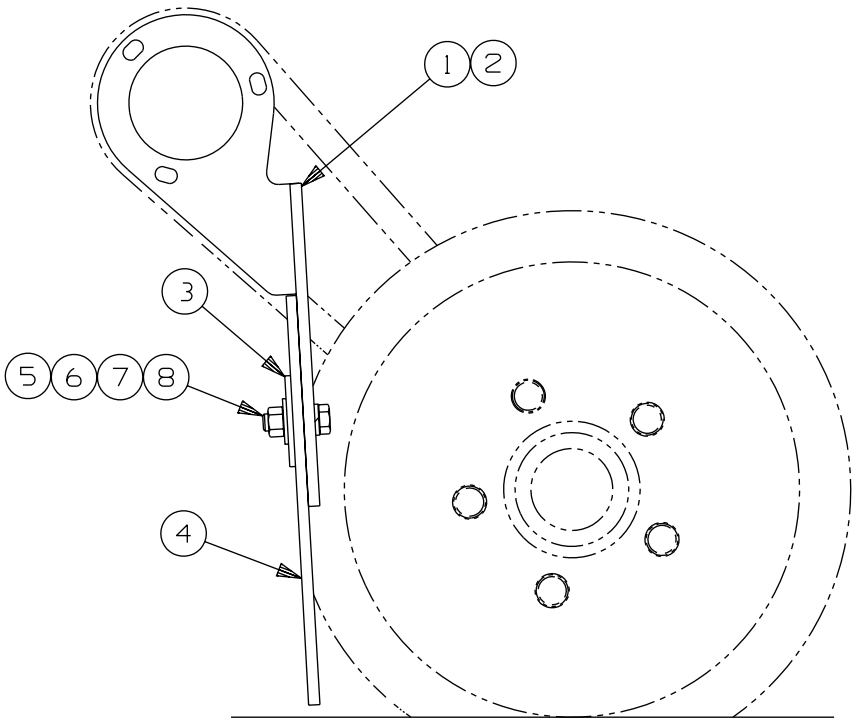
139627 BUMPER GROUP - REAR



SE020077A-2

ITEM	PART NO	DESCRIPTION	QTY
	139627	BUMPER GROUP - REAR	1
1	136021	Support	2
2	136020	Bracket	2
3	136032	Plate	4
4	138111	Bumper	1
5	F023417	Cap Screw, 3/8-16 x 1-1/2" GR 5 Hex Flg Hd	8
6	F001007	Cap Screw, 3/8-16 x 1" GR 5 Hex Hd.	8
7	F023225	Hex Flg Nut, 3/8"-16 GR 5	8
8	138097	Plate	2
9	F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	8
10	F022037	Hex Flg Nut, 1/2"-13 GR 5	8
11	136031	Bar	4
12	F002355	Cap Screw, 1/4-20 x 3/4" GR 5 Hex Hd	4
13	F022138	Hex Flg Nut, 1/4"-20 GR 5	4
14	107874	Light Bracket	1
15	F015664	License Lamp	1

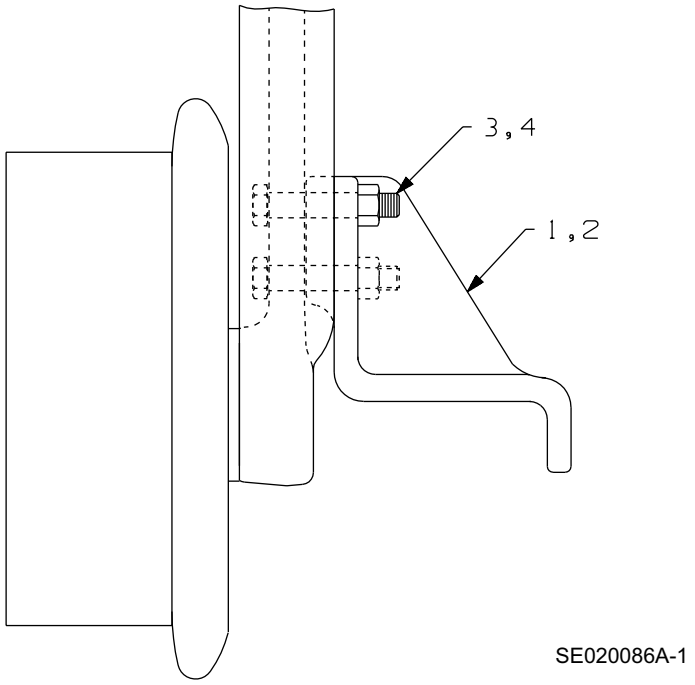
138116 RAIL SWEEP GROUP



SE020085A-1

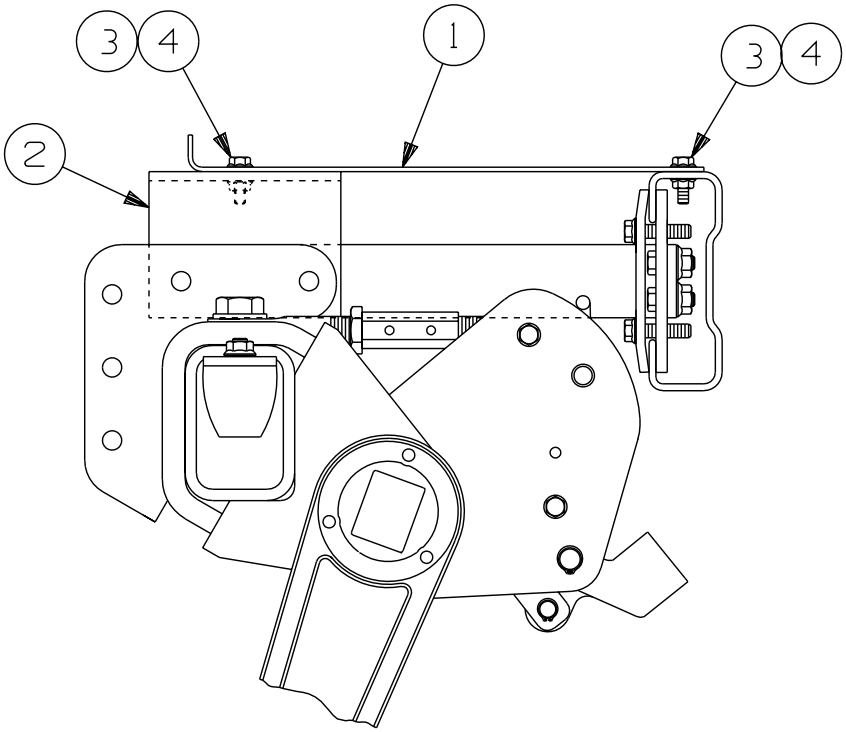
ITEM	PART NO	DESCRIPTION	QTY
	138116	RAIL SWEEP GROUP	1
1	136017	Bracket - RF/LR	1
2	136016	Bracket - LF/RR	1
3	088525	OUTER PLATE	2
4	088524K	Rubber Sweep	2
5	F007020	Hex Nut, 3/8"-16 GR 5	4
6	F001025	SAE Lock Washer, 3/8"	4
7	F001115	Wrought Washer, 3/8"	4
8	F001024	Cap Screw, 3/8-16 x 1-1/2" GR 5 Hex Hd	4

137682 DERAIL SKID GROUP



ITEM	PART NO	DESCRIPTION	QTY
	137682	DERAIL SKIDS	1
1	140100	Derail Skid - LF/RR	1
2	139613	Derail Skid - RF/LR	1
3	F003095	Cap Screw, 1/2-13 x 2-3/4" Hex Hd	4
4	F013500	Hex Elastic Stop Nut, 1/2"-13	4

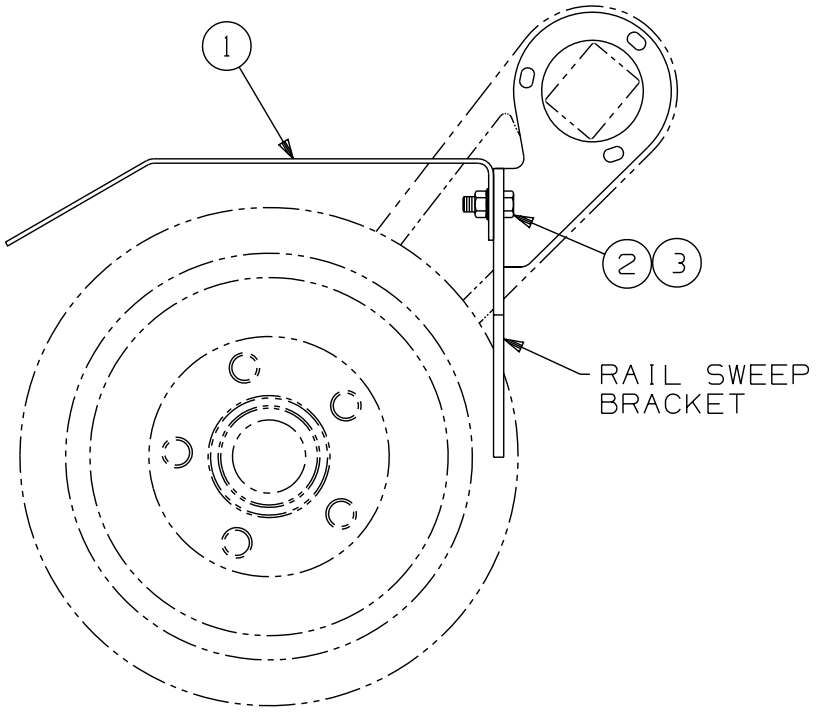
139606 STEP PLATE GROUP - FRONT OR REAR



SE020198A-1

ITEM	PART NO	DESCRIPTION	QTY
	139606	STEP PLATE GROUP - FRONT or REAR	1
	139607	Step Plate	1
	139611	Mounting Angle	2
	F022070	Cap Screw, 5/16-18 x 1" GR 5 Hex Flg Hd.	7
	F040088	Hex Flg Nut, 5/16"-18 GR 5	7

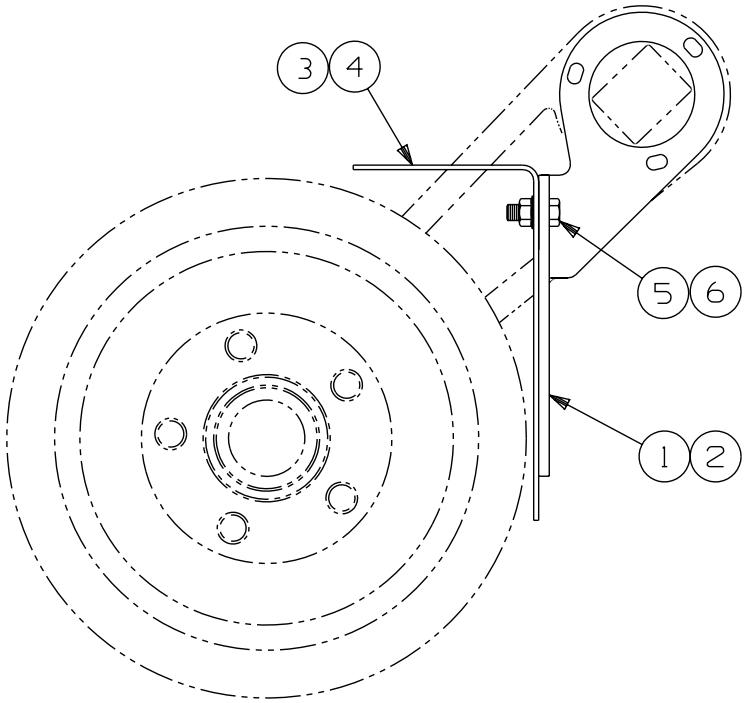
140118 SPLASH GUARD GROUP - FRONT



SE020226A-1

ITEM	PART NO	DESCRIPTION	QTY
	140118	SPLASH GUARD GROUP - FRONT	1
1	140144	Splash Plate	2
2	F001007	Cap Screw, 3/8-16 x 1" GR 5 Hex Hd.	4
3	F023225	Hex Flg Nut, 3/8"-16 GR 5	4

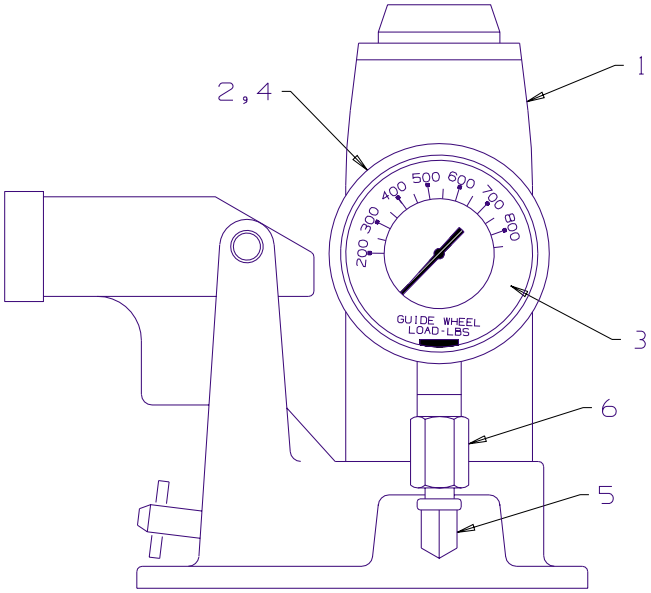
140390 SPLASH GUARD GROUP - REAR



SE020302A-1

ITEM	PART NO	DESCRIPTION	QTY
	140390	SPLASH GUARD GROUP - FRONT	1
1	136016	Rail Sweep Bracket, Right Rear	1
2	136017	Rail Sweep Bracket, Left Rear	1
3	140391	Splash Guard, Left	1
4	140392	Splash Guard, Right	1
5	F001007	Cap Screw, 3/8-16 x 1" GR 5 Hex Hd.	4
6	F023225	Hex Flg Nut, 3/8"-16 GR 5	4

073527 WHEEL WEIGHING JACK



SE073527A-1

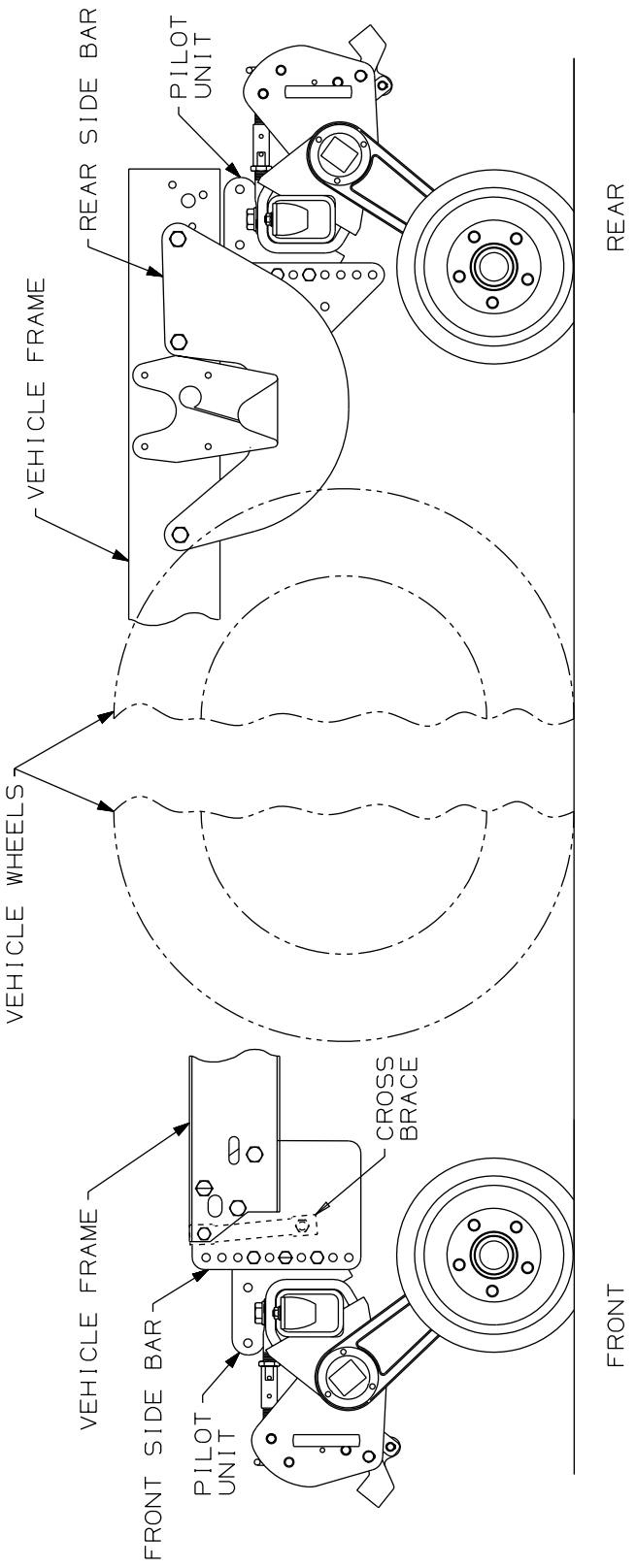
ITEM	PART NO	DESCRIPTION	QTY
	073527	JACK ASSEMBLY	1
1	F025513	Hydraulic Jack	1
2	F024256	Gauge	1
3	154383	Decal, Gauge Face	1
4	156051	Decal, Warning - Misuse Of Product...	1
5	146353	90° Elbow, 1/8 M NPT x 1/8 F NPT	1
6	F023088	Adapter, 1/8 M NPT x 1/4 F NPT	1

138123 DECAL SERVICE GROUP

PART NO	DESCRIPTION	QTY
138123	DECAL SERVICE GROUP	1
F018082	Decal, Safety Instructions - Lock Front Wheels...	1
F018084	Decal, Operation	2
138092	Decal, Operating Instructions	1
140220	Decal, Warning - Do Not Operate This Machine Before...	3
155007	Decal, HY-RAIL ® Vehicle Completed By...	1
162058	Decal, Harsco Track Technologies Supplied Hand Lever...	1
020209	Decal Application Drawing	1
BUL #1066	HR1000A1 Operator's Service And Parts Manual	1

TYPICAL MOUNTING BRACKETS

This illustration shows typical mounting brackets that are common in most groups and rail pilot units, mounted on a vehicle. Mounting brackets and applications will vary from vehicle to vehicle. See Section 8, Vehicle Applications, to find the correct mounting bracket group applicable to your make, model and year of vehicle.



SE90A158A-1

FASTENER KITS FOR FRONT AND REAR BRACKET MOUNTING

PART NO	DESCRIPTION	QTY
181460	FASTENER KIT	1
F018650	Cap Screw, 1/2-13 x 1-1/2" Hex Hd	8
F018861	Cap Screw, 1/2-13 x 2-1/4" Hex Hd	10
F019762	Cap Screw, 5/8-11 x 1-1/2" Hex Hd	4
F040637	Cap Screw, 3/4-10 x 1-3/4" Hex Hd	2
F020672	Cap Screw, 3/4-10 x 5" Hex Hd	4
F013500	Elastic Stop Nut, 1/2"-13	18
F012452	Elastic Stop Nut, 5/8"-11	4
F013633	Elastic Stop Nut, 3/4"-10	6
F001267	Wrought Washer, 1/2"	18
181461	FASTENER KIT	1
F018650	Cap Screw, 1/2-13 x 1-1/2" Hex Hd	18
F019501	Cap Screw, 5/8-11 x 1-3/4" Hex Hd	4
F013500	Elastic Stop Nut, 1/2"-13	18
F012452	Elastic Stop Nut, 5/8"-11	4
F001267	Wrought Washer, 1/2"	18
F023012	Hardened Washer	4
181462	FASTENER KIT	1
F018650	Cap Screw, 1/2-13 x 1-1/2" Hex Hd	8
F018861	Cap Screw, 1/2-13 x 2-1/4" Hex Hd	4
F019762	Cap Screw, 5/8-11 x 1-1/2" Hex Hd	4
F023743	Cap Screw, 5/8-11 x 5-1/2" Hex Hd	2
F040637	Cap Screw, 3/4-10 x 1-3/4" Hex Hd	4
F013500	Elastic Stop Nut, 1/2"-13	12
F012452	Elastic Stop Nut, 5/8"-11	6
F013633	Elastic Stop Nut, 3/4"-10	4
F001267	Wrought Washer, 1/2"	12
F023012	Hardened Washer	6
F021137	Hardened Washer	4
187178	FASTENER KIT	1
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	24
F020460	Cap Screw, 5/8-11 x 2" GR 8 Hex Hd.	4
F022173	Cap Screw, 3/4-10 x 2" GR 8 Hex Hd.	8
700564300	Cap Screw, 1/2-13 x 3" GR 8 Hex Hd.	6
F013500	Elastic Stop Nut	24
F013633	Elastic Stop Nut, 3/4"-10	8
F017188	Hex Elastic Stop Nut, 5/8"-11	4
F026081	Hex Flg Nut 1/2"-13 GR 8	4
F024047	Washer	18
F023012	Harden Washer.	8
F021137	Hardened Washer	4

154090 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
154090	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

154078	Side Bar, Left	1
154079	Side Bar, Right	1
139088	Bar	2
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	6
F022037	Hex Flg Nut, 1/2"-13 GR 5	6
F005192	Cap Screw, 5/8-11 x 1-3/4" GR 5 Hex Hd	2
125978	Washer	4
F021924	Hex Flg Nut 5/8"-11 GR 5	2
F001107	Cap Screw, 5/8-11 x 3-1/2" GR 5 Hex Hd	2
154083	Brace	1
134233	Spacer (use as required)	4
020412	Front Unit Application Drawing	

Parts For Mounting Rear Unit

139089	Angle, Right	1
139090	Angle, Left.	1
139091	Bar	2
139092	Bar	2
139094	Bar	2
F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	4
F001075	SAE Lock Washer, 1/2"	4
F005551	Cap Screw, 3/4-10 x 1-1/2" GR 5 Hex Hd	2
F001354	SAE Lock Washer, 3/4"	2
154075	Side Bar, Left	1
154076	Side Bar, Right	1
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	12
F022037	Hex Flg Nut, 1/2"-13 GR 5	12
154081	Bar	2
F001125	Cap Screw, 3/8-16 x 1-1/4" GR 5 Hex Hd	2
F023225	Hex Flg Nut, 3/8"-16 GR 5	2
F023111	Washer	8
162430	Plate, Left	1
162431	Plate, Right	1
F001115	Wrought Washer, 3/8".	2
020413	Rear Unit Application Drawing	

157011 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
157011	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

157012	Side Bar	2
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	14
F022037	Hex Flg Nut, 1/2"-13 GR 5	14
163636	Brace End	1
163634	Brace End	1
F003566	Cap Screw, 5/8-11 x 1-1/2" GR 5 Hex Hd	2
F021924	Hex Flg Nut, 5/8"-11 GR 5	2
020787	Front Unit Application Drawing	

Parts For Mounting Rear Unit

154582	Side Bar	1
154584	Side Bar	1
F003566	Cap Screw, 5/8-11 x 1-1/2" GR 5 Hex Hd	6
F001103	SAE Lock Washer, 5/8"	6
F007023	Hex Nut, 5/8"-11 GR 5	6
163634	Brace End	1
163636	Brace End	1
F023386	Cap Screw 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	10
F022037	Hex Flg Nut, 1/2"-13 GR 5	10
F005551	Cap Screw, 3/4-10 x 1-1/2" GR 5 Hex Hd	2
F013695	Hex Nut, 3/4"-10 GR 5	2
F001354	SAE Lock Washer, 3/4"	2
020492	Rear Unit Application Drawing	

157291 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
157291	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

156076	Side Bar	1
156077	Side Bar	1
F003566	Cap Screw, 5/8-11 x 1-1/2" GR 5 Hex Hd	4
F021924	Hex Flg Nut, 5/8"-11 GR 5	4
F023417	Cap Screw, 3/8-16 x 1-1/2" GR 5 Hex Hd	4
F023225	Hex Flg Nut, 3/8"-16 GR 5	4
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	6
F022037	Hex Flg Nut, 1/2"-13 GR 5	6
020833	Front Unit Application Drawing	

Parts For Mounting Rear Unit

154582	Side Bar	1
154584	Side Bar	1
F003566	Cap Screw, 5/8-11 x 1-1/2" GR 5 Hex Hd	6
F001103	SAE Lock Washer, 5/8"	6
F007023	Hex Nut, 5/8"-11 GR 5	6
163634	Brace End	1
163636	Brace End	1
F023386	Cap Screw 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	10
F022037	Hex Flg Nut, 1/2"-13 GR 5	10
F005551	Cap Screw, 3/4-10 x 1-1/2" GR 5 Hex Hd	2
F013695	Hex Nut, 3/4"-10 GR 5	2
F001354	SAE Lock Washer, 3/4"	2
020492	Rear Unit Application Drawing	

159020 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
159020	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

162441	Side Bar, Left	1
162442	Side Bar, Right	1
F006383	Cap Screw, 3/4-10 x 5" GR 5 Hex Hd.	4
700666075	Hex Lock Nut, 3/4"-10	4
158801	Brace	1
134233	Spacer (use as required)	6
F003566	Cap Screw, 5/8-11 x 1-1/2" GR 5 Hex Hd	4
F021924	Hex Flg Nut, 5/8"-11 GR 5	4
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	6
F022037	Hex Flg Nut, 1/2"-13 GR 5	6
164513	Spacer Bar	2
168114	Plate, Right	1
168115	Plate, Left	1
168116	Tube	4
F018861	Cap Screw, 1/2-13 x 2-1/4" GR 8 Hex Hd	6
F014487	Elastic Stop Nut, 1/2"-13	10
F023887	Cap Screw, M16 X 2.0 X 120 mm CL10.9 Hex Hd.	2
138400	Tube	2
F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	4
020974	Front Unit Application Drawing	

Parts For Mounting Rear Unit

139642	Side Bar	1
139644	Side Bar	1
F015134	Cap Screw, 3/4-10 x 1-3/4" GR 5 Hex Hd	4
F021926	Hex Flg Nut, 3/4"-10 GR 5	4
F001442	Cap Screw, 1/2-13 x 2" GR 5 Hex Hd.	5
F022037	Hex Flg Nut, 1/2-13 GR 5	5
163634	Brace End	2
163636	Brace End	2
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	7
F023690	Washer	2
020208	Rear Unit Application Drawing	

159021 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
159021	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

159097	Side Bar, Left	1
159098	Side Bar, Right	1
F015134	Cap Screw, 3/4-10 x 1-3/4" GR 5 Hex Hd	4
F021926	Hex Flg Nut, 3/4"-10 GR 5	4
F001095	Cap Screw, 1/2-13 x 1-3/4" GR 5 Hex Hd	4
F022037	Hex Flg Nut, 1/2"-13 GR 5	4
F009425	SAE Washer, 5/8"	4
158801	Brace	1
F003566	Cap Screw, 5/8-11 x 1-1/2" GR 5	4
F021924	Hex Flg Nut, 5/8"-11 GR 5	4
134233	Bar	4
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	6
F022037	Hex Flg Nut, 1/2"-13 GR 5	6
159101	Spacer Bar	2
159096	Spacer	4
020975	Front Unit Application Drawing	

Parts For Mounting Rear Unit

140385	Side Bar	1
140387	Side Bar	1
F001442	Cap Screw, 1/2-13 x 2" GR 5 Hex Hd.	2
F002753	Cap Screw, 1/2-13 x 2-1/4" GR 5 Hex Hd	2
F022037	Hex Flg Nut, 1/2"-13 GR 5	11
F015134	Cap Screw, 3/4-10 x 1-3/4" GR 5 Hex Hd	2
F021926	Hex Flg Nut, 3/4"-10 GR 5	2
163634	Brace End	1
163636	Brace End	1
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	7
072897	Hardened Washer (use as required)	3
020281	Rear Unit Application Drawing	

159102 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
159102	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

159097	Side Bar, Left	1
159098	Side Bar, Right	1
F015134	Cap Screw, 3/4-10 x 1-3/4" GR 5 Hex Hd	4
F021926	Hex Flg Nut, 3/4"-10 GR 5	4
158801	Brace	1
134233	Spacer (use as required)	6
F003566	Cap Screw, 5/8-11 x 1-1/2" GR 5 Hex Hd	4
F021924	Hex Flg Nut, 5/8"-11 GR 5	4
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	6
F022037	Hex Flg Nut, 1/2"-13 GR 5	10
126002	Sleeve	2
125978	Washer	2
F007941	Cap Screw, 5/8-11 x 5" GR 5 Hex Hd	2
F021924	Hex Flg Nut, 5/8"-11 GR 5	2
F001095	Cap Screw, 1/2-13 x 1-3/4" GR 5 Hex Hd	4
F009425	SAE Washer, 5/8"	4
159096	Spacer (use as required)	4
164513	Spacer (use as required)	2
021000	Front Unit Application Drawing	

Parts For Mounting Rear Unit

140385	Side Bar	1
140387	Side Bar	1
F001442	Cap Screw, 1/2-13 x 2" GR 5 Hex Hd	2
F002753	Cap Screw, 1/2-13 x 2-1/4" GR 5 Hex Hd	2
F022037	Hex Flg Nut, 1/2"-13 GR 5	11
F015134	Cap Screw, 3/4-10 x 1-3/4" GR 5 Hex Hd	2
F021926	Hex Flg Nut, 3/4"-10 GR 5	2
163634	Brace End	1
163636	Brace End	1
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	7
072897	Hardened Washer (use as required)	3
020281	Rear Unit Application Drawing	

159315 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
159315	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

159097	Side Bar, Left	1
159098	Side Bar, Right	1
F015134	Cap Screw, 3/4-10 x 1-3/4 GR 5 Hex Hd	2
F021926	Hex Flg Nut, 3/4"-10 GR 5	2
F001095	Cap Screw, 1/2-13 x 1-3/4" GR 5 Hex Hd	4
F022037	Hex Flg Nut, 1/2"-13 GR 5	10
F009425	SAE Washer 5/8"	4
158801	Brace	1
F003566	Cap Screw, 5/8-11 x 1-1/2" GR 5 Hex Hd	4
F021924	Hex Flg Nut, 5/8"-11 GR 5	4
134233	Spacer (use as required)	6
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	6
159096	Spacer (use as required)	4
164513	Spacer	2
021006	Front Unit Application Drawing	

Parts For Mounting Rear Unit

154066	Side Bar	1
154069	Side Bar	1
F005192	Cap Screw, 5/8-11 x 1-3/4" GR 5 Hex Hd	8
F021924	Hex Flg Nut, 5/8"-11 GR 5	8
163634	Brace End	1
163636	Brace End	1
F001539	Cap Screw, 1/2-13 x 1-1/4" GR 5 Hex Hd	1
F022037	Hex Flg Nut, 1/2"-13 GR 5	7
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	6
020405	Rear Unit Application Drawing	

161285 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
161285	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

159638	Side Bar, Right	1
159642	Side Bar, Left	1
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	18
F014487	Elastic Stop Nut, 1/2"-13	18
F001267	Wrought Washer, 1/2"	18
163634	Brace End	1
163636	Brace End	1
021109	Front Unit Application Drawing	

Parts For Mounting Rear Unit

159915	Side Bar	1
159916	Side Bar	1
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	12
F014487	Elastic Stop Nut, 1/2"-13	12
F001267	Wrought Washer, 1/2"	12
F019501	Cap Screw, 5/8-11 x 1-3/4" Hex Hd	2
F001121	Washer	2
F025425	Hex Lock Nut, 5/8"-11	2
163634	Brace End	1
163636	Brace End	1
021110	Rear Unit Application Drawing	

161286 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
161286	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

159638	Side Bar, Right	1
159642	Side Bar, Left	1
F022036	Cap Screw, 1/2-13 x 1-1/4" GR 5 Hex Flg Hd	12
F022037	Hex Flg Nut, 1/2"-13 GR 5	12
F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	6
F001075	SAE Lock Washer, 1/2"	6
F003598	Hex Nut, 1/2"-13 GR 5	6
163636	Brace End	1
163634	Brace End	1
F024047	Washer	4
021109	Front Unit Application Drawing	

Parts For Mounting Rear Unit

161302	Side Bar, Left	1
161301	Side Bar, Right	1
F001539	Cap Screw, 1/2-13 x 1-1/4" GR 5 Hex Hd	4
F001075	SAE Lock Washer, 1/2"	10
F003598	Hex Nut, 1/2"-13 GR 5	10
F005192	Cap Screw, 5/8-11 x 1-3/4" GR 5 Hex Hd	4
125978	Washer	4
F001103	SAE Lock Washer, 5/8"	4
F007023	Hex Nut, 5/8"-11 GR 5	4
163636	Brace End	1
163634	Brace End	1
F024047	Washer	4
F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	6
021111	Rear Unit Application Drawing	

161646 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
161646	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

159097	Side Bar, Left	1
159098	Side Bar, Right	1
F015134	Cap Screw, 3/4-10 x 1-3/4" GR 5 Hex Hd	2
F021926	Hex Flg Nut, 3/4"-10 GR 5	2
F001095	Cap Screw, 1/2-13 x 1-3/4" GR 5 Hex Hd	4
F022037	Hex Flg Nut, 1/2"-13 GR 5	4
F009425	SAE Washer, 5/8"	4
158801	Brace	1
F003566	Cap Screw, 5/8-11 x 1-1/2" GR 5 Hex Hd	4
F021924	Hex Flg Nut, 5/8"-11 GR 5	4
134233	Spacer (use as required)	4
F023386	Cap Screw, 1/2-13 x 1- 1/2" GR 5 Hex Flg Hd	6
F022037	Hex Flg Nut, 1/2"-13 GR 5	6
159101	Bar	2
159096	Spacer	4
021150	Front Unit Application Drawing	

Parts For Mounting Rear Unit

140385	Side Bar	1
140387	Side Bar	1
F001442	Cap Screw, 1/2-13 x 2" GR 5 Hex Hd.	2
F002753	Cap Screw, 1/2-13 x 2-1/4" GR 5 Hex Hd	2
F022037	Hex Flg Nut, 1/2"-13 GR 5	11
F015134	Cap Screw, 3/4-10 x 1-3/4" GR 5 Hex Hd	2
F021926	Hex Flg Nut, 3/4"-10 GR 5	2
163636	Brace End	1
F023386	Cap Screw, 1/2-13 x 1/2" GR 5 Hex Flg Hd	7
163634	Brace End	1
020281	Rear Unit Application Drawing	

162452 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
162452	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

159638	Side Bar, Right	1
159642	Side Bar, Left	1
F001539	Cap Screw, 1/2-13 x 1-1/4" GR 5 Hex Hd	6
055954	Spacer	12
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	10
F022037	Hex Flg Nut, 1/2"-13 GR 5	16
163636	Brace End	1
163634	Brace End	1
072897	Washer	2
F001095	Cap Screw, 1/2-13 x 1-3/4" GR 5 Hex Hd	2
F022037	Hex Flg Nut, 1/2"-13 GR 5	2
021266	Front Unit Application Drawing	

Parts For Mounting Rear Unit

162302	Side Bar	1
162304	Side Bar	1
F001539	Cap Screw, 1/2-13 x 1-1/4" GR 5 Hex Hd	4
F022037	Hex Flg Nut, 1/2"-13 GR 5	12
F007985	Cap Screw, 3/4-10 x 2" GR 5 Hex Hd.	2
F021926	Hex Flg Nut, 3/4"-10 GR 5	2
163635	Brace End	1
163634	Brace End	1
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	8
072897	Washer	2
021193	Rear Unit Application Drawing	

164044 MOUNTING BRACKET GROUP FOR HR1000A FRONT ONLY

PART NO	DESCRIPTION	QTY
164044	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

159638	Side Bar, Right	1
159642	Side Bar, Left	1
F022036	Cap Screw, 1/2-13 x 1-1/4" GR 5 Hex Flg Hd	12
F022037	Hex Flg Nut, 1/2"-13 GR 5	12
F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	6
F001075	SAE Lock Washer, 1/2"	6
F003598	Hex Nut, 1/2"-13 GR 5	6
163636	Brace End	1
163634	Brace End	1
F024047	Washer	4
021109	Front Unit Application Drawing	

167879 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
167879	MOUNTING BRACKET GROUP	1
181461	Fastener Kit (for front and rear bracket mounting)	1

Parts For Mounting Front Unit

168269	Side Bar, Right	1
168268	Side Bar, Left	1
055954	Spacer (use as required)	12
163634	Brace End	1
163636	Brace End	1
021716	Front Unit Application Drawing	

Parts For Mounting Rear Unit

168266	Side Bar - Left	1
168267	Side Bar - Right	1
163634	Brace End	2
163635	Brace End	2
021717	Rear Unit Application Drawing	

169034 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
169034	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

168268	Side Bar, Left	1
168269	Side Bar, Right	1
055954	Spacer (use as required)	12
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	16
F022037	Hex Flg Nut, 1/2"-13 GR 5	8
163636	Brace End	1
163634	Brace End	1
072897	Washer	2
F001095	Cap Screw, 1/2-13 x 1-3/4 GR 5 Hex Hd	2
F014487	Elastic Stop Nut, 1/2"-13	10
F002965	SAE Washer, 1/2"	14
021629	Front Unit Application Drawing	

Parts For Mounting Rear Unit

162304	Side Bar	1
162302	Side Bar	1
F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	4
F001267	Wrought Washer, 1/2"	8
F014487	Elastic Stop Nut, 1/2"-13	4
F002929	SAE Washer, 3/4"	4
163635	Brace End	1
163634	Brace End	1
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	8
072897	Washer	2
F022037	Hex Flg Nut, 1/2"-13 GR 5	8
F015134	Cap Screw, 3/4-10 x 1-3/4" GR 5 Hex Hd	4
F001354	SAE Lock Washer, 3/4"	4
F013695	Hex Nut, 3/4"-10 GR 5	4
021760	Rear Unit Application Drawing	

170677 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
170677	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

170673	Side Bar, Right	1
170674	Side Bar, Left	1
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	7
F022037	Hex Flg Nut, 1/2"-13 GR 5	7
F015066	Cap Screw, 9/16-12 x 1-1/2" GR 5 Hex Hd	2
F002398	Hex Nut, 9/16"-12 GR 5	4
F002782	SAE Lock Washer, 9/16"	4
F023222	Washer	10
F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	4
F002965	SAE Washer, 1/2"	4
F022037	Hex Flg Nut, 1/2"-13 GR 5	4
188333	Cap Screw, 9/16-12 x 4" GR 8 Hex Hd.	2
163635	Brace End	2
163634	Brace End	2
021889	Front Unit Application Drawing	

Parts For Mounting Rear Unit

156019	Side Bar	1
156022	Side Bar	1
F020599	Cap Screw, 1/2-13 x 4" GR 8 Hex Hd	4
F022037	Hex Flg Nut, 1/2"-13 GR 5	13
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	9
072897	Washer	4
163636	Brace End	1
163634	Brace End	1
020693	Rear Unit Application Drawing	

170768 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
170768	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

170687	Side Bar, Right	1
170714	Side Bar, Left	1
170685	Angle	1
175646	Angle	1
F012484	Cap Screw, 5/8-18 x 1-1/2" GR 5 Hex Hd	2
F013239	Hex Lock Nut, 5/8"-18	2
F001121	Washer	2
F010232	Cap Screw, 7/16-20 x 1-1/4" GR 5 Hex Hd	4
F001373	Wrought Washer, 7/16"	4
F017965	Hex Lock Nut, 7/16"-20	4
F012762	Cap Screw, 1/2-20 x 2" GR 5 Hex Hd	2
F001267	Wrought Washer, 1/2"	2
F010606	Hex Lock Nut, 1/2"-20	8
F008973	Cap Screw, 1/2-20 x 1-1/2" GR 5 Hex Hd	6
171048	Light Bracket	2
021915	Front Unit Application Drawing	

Parts For Mounting Rear Unit

170688	Side Bar	1
170683	Side Bar	1
F008973	Cap Screw, 1/2-20 x 1-1/2" GR 5 Hex Hd	15
F010606	Hex Lock Nut, 1/2"-20	15
F001267	Wrought Washer, 1/2"	8
163636	Brace End	1
163634	Brace End	1
021916	Rear Unit Application Drawing	

171075 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
171075	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

170437	Side Bar, Right	1
170438	Side Bar, Right	1
F012484	Cap Screw, 5/8-18 x 1-1/2" GR 5 Hex Hd	2
F009425	SAE Washer, 5/8"	2
F013239	Hex Lock Nut, 5/8"-18	2
F012359	Cap Screw, 3/4-16 x 1-3/4" GR 5 Hex Hd	4
F002929	SAE Washer, 3/4"	4
F011182	Hex Lock Nut, 3/4"-16	4
F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	6
F013500	Elastic Stop Nut, 1/2"	6
171048	Light Bracket	2
021928	Front Unit Application Drawing	

Parts For Mounting Rear Unit

170442	Side Bar, Left	1
170443	Side Bar, Right	1
F018821	Cap Screw, 5/8-18 x 2-3/4" GR 5 Hex Hd	2
F009425	SAE Washer, 5/8"	2
F013239	Hex Lock Nut, 5/8"-18	2
F005255	Cap Screw, 1/2-20 x 2-3/4" GR 5 Hex Hd	6
F002965	SAE Washer, 1/2"	7
F010606	Hex Lock Nut, 1/2"-20	6
F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	9
F013500	Elastic Stop Nut, 1/2"	9
163634	Brace End	2
163635	Brace End	1
163636	Brace End	1
171070	Splash Guards	1
171071	Trim	1
021929	Rear Unit Application Drawing	

178131 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
178131	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

178094	Side Bar, Right	1
178100	Side Bar, Left	1
700564200	Cap Screw, 1/2-13 x 2" GR 8 Hex Hd.	8
F013500	Elastic Stop Nut, 1/2"	8
F001075	SAE Lock Washer, 1/2"	6
163636	Brace End	1
163634	Brace End	1
F024047	Washer	6
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	8
178132	Spacer Bar	2
022482	Front Unit Application Drawing	

Parts For Mounting Rear Unit

178124	Side Bar, Right	1
178125	Side Bar, Left	1
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	15
F013500	Elastic Stop Nut, 1/2"	15
163634	Brace End	1
163636	Brace End	1
022483	Rear Unit Application Drawing	

178177 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
178177	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

178171	Side Bar, Right	1
178172	Side Bar, Left	1
700564200	Cap Screw, 1/2-13 x 2" GR 8 Hex Hd.	8
F013500	Elastic Stop Nut, 1/2"	8
F001075	SAE Lock Washer, 1/2"	6
163636	Brace End	1
163634	Brace End	1
F024047	Washer	6
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	2
178132	Spacer Bar	2
022497	Front Unit Application Drawing	

Parts For Mounting Rear Unit

178167	Side Bar, Right	1
178168	Side Bar, Left	1
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	15
F013500	Elastic Stop Nut, 1/2"	15
163634	Brace End	1
163636	Brace End	1
022498	Rear Unit Application Drawing	

180040 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
180040	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

180017	Side Bar	2
F018861	Cap Screw, 1/2-13 x 2-1/4" GR 8 Hex Hd	8
F013500	Elastic Stop Nut, 1/2"	8
F040637	Cap Screw, 3/4-10 x 1-3/4" GR 8 Hex Hd	2
F013633	Elastic Stop Nut, 3/4"-10	2
F001753	Wrought Washer, 3/4"	6
F019762	Cap Screw, 5/8-11 x 1-1/2" GR 8 Hex Hd	4
F012452	Elastic Stop Nut, 5/8"	4
F001121	Washer	8
163635	Brace End	2
163634	Brace End	2
180035	Spacer Bar	2
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	2
022651	Front Unit Application Drawing	

Parts For Mounting Rear Unit

180022	Side Bar, Left	1
180018	Side Bar, Right	1
F019762	Cap Screw, 5/8-11 x 1-1/2" GR 8 Hex Hd	4
F012452	Elastic Stop Nut, 5/8"	4
F001121	Washer	8
F018861	Cap Screw, 1/2-13 x 2-1/4" GR 8 Hex Hd	6
F013500	Elastic Stop Nut, 1/2"	10
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	4
F001267	Wrought Washer, 1/2"	4
163634	Brace End	2
163635	Brace End	2
180034	Spacer Bar	2
022652	Rear Unit Application Drawing	

180729 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
180729	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

172489	Side Bar, Right	1
172490	Side Bar, Left	1
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	18
F014487	Elastic Stop Nut, 1/2"-13	18
F001267	Wrought Washer, 1/2"	16
163634	Brace End	1
163636	Brace End	1
055954	Spacer (use as required)	6
022663	Front Unit Application Drawing	

Parts For Mounting Rear Unit

159915	Side Bar	1
159916	Side Bar	1
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	12
F014487	Elastic Stop Nut, 1/2"-13	12
F001267	Wrought Washer, 1/2"	12
F019501	Cap Screw, 5/8-11 x 1-3/4" Hex Hd	2
F025425	Hex Lock Nut, 5/8"-11	2
F001121	Washer	2
163634	Brace End	1
163636	Brace End	1
021110	Rear Unit Application Drawing	

181700 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
181700	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

178094	Side Bar, Right	1
178100	Side Bar, Left	1
F013500	Elastic Stop Nut, 1/2"	12
163636	Brace End	1
163634	Brace End	1
F023222	Washer	14
F018861	Cap Screw, 1/2-13 x 2-1/4" GR 8 Hex Hd	2
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	8
023505	Front Unit Application Drawing	

Parts For Mounting Rear Unit

181713	Side Bar, Right	1
181714	Side Bar, Left	1
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	6
181721	Block	4
181719	Plate	2
F013500	Elastic Stop Nut, 1/2"	8
F019500	Cap Screw, 1/2-13 x 1-1/4" Hex Hd	2
F022822	Cap Screw, 5/8-11 x 4-1/2" GR 8 Hex Hd	4
F023222	Washer	10
F012452	Elastic Stop Nut, 5/8"	4
F023012	Hardened Washer	4
023506	Rear Unit Application Drawing	

184528 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
184528	MOUNTING BRACKET GROUP	1
187178	Fastener Kit (for front and rear bracket mounting)	1
	Parts For Mounting Front Unit	
184477	Side Bar, Left	1
184469	Side Bar, Right	1
184487	Bracket, Left	1
184486	Bracket, Right	1
F041212	Hex Elastic Stop Nut, M12	6
184491	Shim	2
184480	Bar	4
023066	Front Unit Application Drawing	
	Parts For Mounting Rear Unit	
184519	Side Bar, Right	1
184518	Side Bar, Left	1
163635	Brace End	2
163634	Brace End	2
023067	Rear Unit Application Drawing	

184532 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
184532	MOUNTING BRACKET GROUP	1
187178	Fastener Kit (for front and rear bracket mounting)	1
	Parts For Mounting Front Unit	
184398	Side Bar, Left	1
184399	Side Bar, Right	1
184472	Bracket, Right	1
184473	Bracket, Left	1
023064	Front Unit Application Drawing	
	Parts For Mounting Rear Unit	
184519	Side Bar, Right	1
184518	Side Bar, Left	1
163635	Brace End	2
163634	Brace End	2
023065	Rear Unit Application Drawing	

187121 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
187121	MOUNTING BRACKET GROUP	1
181462	Fastener Kit (for front and rear bracket mounting)	1

Parts For Mounting Front Unit

184477	Side Bar, Left	1
184469	Side Bar, Right	1
184487	Bracket, Left	1
184486	Bracket, Right	1
F041212	Elastic Stop Nut, M12	6
184491	Shim	2
184480	Bar	4
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	18
F013500	Elastic Stop Nut, 1/2"	14
F020460	Cap Screw, 5/8-11 x 2" GR 8 Hex Hd.	2
F017188	Elastic Stop Nut, 5/8"-11	2
F009425	SAE Washer, 5/8"	2
023066	Front Unit Application Drawing	

Parts For Mounting Rear Unit

186244	Side Bar, Left	1
186245	Side Bar, Right	1
163635	Brace End	2
163634	Brace End	2
187119	Spacer	2
700564300	Cap Screw, 1/2-13 x 3" GR 8 Hex Hd.	6
F020460	Cap Screw, 5/8-11 x 2" GR 8 Hex Hd.	2
F017188	Elastic Stop Nut, 5/8"-11	2
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	4
F013500	Elastic Stop Nut, 1/2"	10
023207	Rear Unit Application Drawing	

187123 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
187123	MOUNTING BRACKET GROUP	1
187178	Fastener Kit (for front and rear bracket mounting)	1
	Parts For Mounting Front Unit	
184398	Side Bar, Left	1
184399	Side Bar, Right	1
184472	Bracket, Right	1
184473	Bracket, Left	1
184480	Bar	4
023064	Front Unit Application Drawing	
	Parts For Mounting Rear Unit	
186244	Side Bar, Left	1
186245	Side Bar, Right	1
163635	Brace End	2
163634	Brace End	2
187119	Spacer	2
023207	Rear Unit Application Drawing	

187210 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
187210	MOUNTING BRACKET GROUP	1
181461	Fastener Kit (for front and rear bracket mounting)	1
	Parts For Mounting Front Unit	
187192	Side Bar, Left	1
187196	Side Bar, Right	1
187197	Bar	2
187202	Link Assembly	2
187198	Bar	2
163635	Brace End	2
163634	Brace End	2
023282	Front Unit Application Drawing	
	Parts For Mounting Rear Unit	
187294	Side Bar, Left	1
187295	Side Bar, Right	1
F019501	Cap Screw, 5/8-11 x 1-3/4" Hex Hd	2
F012452	Elastic Stop Nut, 5/8"	4
023284	Rear Unit Application Drawing	

187212 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
187212	MOUNTING BRACKET GROUP	1
181461	Fastener Kit (for front and rear bracket mounting)	1

Parts For Mounting Front Unit

187208	Side Bar	2
187197	Bar	2
187202	Link	2
187198	Bar	2
163635	Brace End	4
163634	Brace End	4
700564300	Cap Screw, 1/2-13 x 3" GR 8 Hex Hd	6
F022037	Hex Flg Nut, 1/2"-13 GR 5	2
F021924	Hex Flg Nut, 5/8"-11 GR 5	2
F024602	Hardened Washer	16
023281	Front Unit Application Drawing	

Parts For Mounting Rear Unit

187294	Side Bar, Left	1
187295	Side Bar, Right	1
F019501	Cap Screw, 5/8-11 x 1-3/4" Hex Hd	6
F012452	Elastic Stop Nut, 5/8"	6
023283	Rear Unit Application Drawing	

188337 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
188337	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

188334	Side Bar, Right	1
188335	Side Bar, Left	1
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	7
F022037	Hex Flg Nut, 1/2"-13 GR 5	11
F015066	Cap Screw, 9/16-12 x 1-1/2" GR 5 Hex Hd	2
700660056	Hex Elastic Stop Nut, 9/16"-12	4
F023222	Washer	10
F001090	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Hd	4
F002965	SAE Washer, 1/2"	4
188333	Cap Screw, 9/16-12 x 4" GR 8 Hex Hd	2
163635	Brace End	2
163634	Brace End	2
023297	Front Unit Application Drawing	

Parts For Mounting Rear Unit

156019	Side Bar	1
156022	Side Bar	1
F020599	Cap Screw, 1/2-13 x 4" GR 8 Hex Hd.	4
F022037	Hex Flg Nut, 1/2"-13 GR 5	13
F023386	Cap Screw, 1/2-13 x 1-1/2" GR 5 Hex Flg Hd	9
072897	Washer	4
163636	Brace End	1
163634	Brace End	1
020693	Rear Unit Application Drawing	

192368 MOUNTING BRACKET GROUP

PART NO	DESCRIPTION	QTY
192368	MOUNTING BRACKET GROUP	1

Parts For Mounting Front Unit

178094	Side Bar, Right	1
178100	Side Bar, Left	1
700564200	Cap Screw, 1/2-13 x 2" GR 8 Hex Hd	8
F013500	Elastic Stop Nut, 1/2"-13	8
F001075	SAE Lock Washer, 1/2"	6
163636	Brace End	1
163634	Brace End	1
F024047	Washer	6
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	2
178132	Bar	2
192307	Bar	2
192306	Angle	2
192311	Plate	2
192338	Cap Screw, 3/8-16 x 1-1/2" GR 8 Hex Hd	4
F009681	SAE Washer, 3/8"	8
F015922	Elastic Stop Nut, 3/8"-16	4
022482	Front Unit Application Drawing	

Parts For Mounting Rear Unit

178124	Side Bar, Right	1
178125	Side Bar, Left	1
F018650	Cap Screw, 1/2-13 x 1-1/2" GR 8 Hex Hd	15
F013500	Elastic Stop Nut, 1/2"-13	15
163634	Brace End	1
163636	Brace End	1
022483	Rear Unit Application Drawing	

137353 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
137353	WHEEL MODIFICATION GROUP	1
133505	WHEEL, 19-1/2 x 6" Rim	5
133504	Decal, Ratings Represent...	1
136141	Decal, Wheel Nut Torque 120 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
133600	Spacer, Rear Wheel, 7/16"	2
137039	Spacer, Front Wheel, 1/16"	2
F016868	Wheel Nut, 9/16"-18 RH (1" Hex)	32
137908	Stop Bolt, Left Front Wheel	1
137909	Stop Bolt, Right Front Wheel	1
M007298	Spring, Extension	2
F019582	Clip	2
F001099	Cap Screw, 5/16-18 x 1" Hex Hd	2
F001100	SAE Lock Washer, 5/16"	2
F007021	Hex Nut, 5/16"-18	2
137349	Spring, Compression	2
019997	Wheel Modification Application Drawing	

138109 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
138109	WHEEL MODIFICATION GROUP	1
F023638	Wheel, 15 x 7"	5
136139	Decal, Wheel Nut Torque...	5
020160	Wheel Modification Application Drawing	

156086 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
156086	WHEEL MODIFICATION GROUP	1
F014271	Wheel Stud, 1/2-20 x 2-5/16"	12
156083	Spacer	2
020763	Wheel Modification Application Drawing	

159849 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
159849	WHEEL MODIFICATION GROUP	1
137670	WHEEL, 19-1/2 x 6-3/4" RIM	5
137671	Decal, Ratings Represent...	1
136141	Decal, Wheel Nut Torque 120 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
133600	Spacer, 7/16" Front Wheel	2
137882	Stop, Left Wheel	1
137881	Stop, Right Wheel	1
159920	Bar	2
164036	Wheel Stud, Front Wheels	16
F016365	Cap Screw, 3/8-24 x 1-1/2" Hex Hd	4
F001025	SAE Lock Washer, 3/8"	4
F015839	Hex Lock Nut, 3/8"-24	4
F001115	Wrought Washer, 3/8"	4
021102	Wheel Modification Application Drawing	

161642 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
161642	WHEEL MODIFICATION GROUP	1
139616	WHEEL, 16-1/2 x 6-3/4"	5
139617	Decal, Ratings Represent...	1
136139	Decal, Wheel Nut Torque 95 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
161634	Wheel Stop, Left Front	1
161645	Wheel Stop, Right Front	1
M007298	Spring, Extension	2
F019582	Clip	2
F001099	Cap Screw, 5/16-18 x 1" Hex Hd	2
F001100	SAE Lock Washer, 5/16"	2
F007021	Hex Nut, 5/16"-18	2
021151	Wheel Modification Application Drawing	

162451 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
162451	WHEEL MODIFICATION GROUP	1
137670	WHEEL, 19-1/2 x 6-3/4"	5
137671	Decal, Ratings Represent...	1
136141	Decal, Wheel Nut Torque 120 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
133600	Spacer, 7/16" Front Wheel	2
164036	Wheel Stud, Front Wheels	16
162449	Stop, Right Wheel	1
162450	Stop, Left Wheel	1
F016365	Cap Screw, 3/8-24 x 1-1/2" Hex Hd	4
F015839	Hex Lock Nut, 3/8"-24	4
159920	Bar	2
F001115	Wrought Washer, 3/8"	4
F001025	SAE Lock Washer, 3/8"	4
021265	Wheel Modification Application Drawing	

163510 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
163510	WHEEL MODIFICATION GROUP	1
135406	Wheel	5
135937	Washer	2
F019949K	Cone Nut, M12	20
021311	Wheel Modification Application Drawing	

163620 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
163620	WHEEL MODIFICATION GROUP	1
139616	WHEEL, 16-1/2 x 6-3/4"	5
139617	Decal, Ratings Represent...	1
136139	Decal, Wheel Nut Torque 95 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
F003354	Cap Screw, 5/16-24 x 1" Hex Hd	2
F011487	Hex Nut, 5/16"-24	2
F001100	SAE Lock Washer, 5/16"	4
M007298	Spring, Extension	2
F019582	Clip	2
F001099	Cap Screw, 5/16-18 x 1" Hex Hd	2
F007021	Hex Nut, 5/16"-18	2
021326	Wheel Modification Application Drawing	

168072 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
168072	WHEEL MODIFICATION GROUP	1
137670	WHEEL, 19-1/2 x 6"	5
137671	Decal, Ratings Represent...	1
136141	Decal, Wheel Nut Torque 120 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
133600	Spacer, 7/16" Front Wheel	2
164036	Wheel Stud, Front Wheels	16
137881	Stop, Right Wheel	1
137882	Stop, Left Wheel	1
159920	Bar	2
F016365	Cap Screw, 3/8-24 x 1-1/2" Hex Hd	4
F001025	SAE Lock Washer, 3/8"	4
F015839	Hex Lock Nut, 3/8"-24	4
F001115	Wrought Washer, 3/8"	4
021504	Wheel Modification Application Drawing	

168290 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
168290	WHEEL MODIFICATION GROUP	1
133505	WHEEL, 19-1/2 x 6"	5
133504	Decal, Ratings Represent...	1
136141	Decal, Wheel Nut Torque 120 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
133600	Spacer, 7/16" Rear Wheel	2
F025483	Wheel Stud, M14 x 1.5 x 91, Front Wheels	16
168291	WHEEL SPACER, FRONT WHEELS	2
164036	Wheel Stud	6
162432	Decal, Warning: Studs In This Brake Drum...	1
F025796	Wheel Nut, M14 x 1.5, Front Wheels	16
F025946	Wheel Nut	32
162449	Stop, Right Wheel	1
162450	Stop, Left Wheel	1
F016365	Cap Screw, 3/8-24 x 1-1/2" Hex Hd	4
F015839	Hex Lock Nut, 3/8"-24	4
159920	Bar	2
F001115	Wrought Washer, 3/8"	4
F001025	SAE Lock Washer, 3/8"	4
021613	Wheel Modification Application Drawing	

168678 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
168678	WHEEL MODIFICATION GROUP	1
168662	WHEEL, 19-1/2 x 6"	5
168680	Decal, Ratings Represent...	1
162065	Decal, Wheel Nut Torque 250 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire	1
F025918	Wheel Stud, 5/8"-18	12
175682	Wheel Stud	12
F025919	Flanged Wheel Nut, 5/8"-18	24
162449	Stop, Right Wheel	1
162450	Stop, Left Wheel	1
F016365	Cap Screw, 3/8-24 x 1-1/2" Hex Hd	4
F015839	Hex Lock Nut, 3/8"-24	4
159920	Bar	2
F001115	Wrought Washer, 3/8"	4
F001025	SAE Lock Washer, 3/8"	4
021718	Wheel Modification Application Drawing	

169031 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
169031	WHEEL MODIFICATION GROUP	1
133242	WHEEL, 19-1/2 x 6"	5
133243	Decal, Ratings Represent...	1
170774	Decal, Wheel Nut Torque 140 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire	1
179142	Decal, Wheel Nut Torque...	5
169329	Decal, This Vehicle Is Equipped With...	2
184106	Hex Flange Nut	32
F025796	Wheel Nut, 60° Cone, Rear Spacer	16
171054	WHEEL SPACER, REAR	2
F026230	Wheel Stud	8
162432	Decal, Warning: Studs In This Brake Drum...	1
171051	Wheel Spacer, Front	2
F025952	Shock Absorber	2
169037	Bushing	4
169036	Tube	2
F002929	SAE Washer, 3/4"	16
044564	Bar	2
116904	Bar	2
021758	Wheel Modification Application Drawing	
021810	Steering Stop Application Drawing	

170050 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
170050	WHEEL MODIFICATION GROUP	1
137649	WHEEL, 19-1/2 x 6"	5
137648	Decal, Ratings Represent...	1
170774	Decal, Wheel Nut Torque 140 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
170736	Spacer, Front Wheel, 7/16"	2
170735	SPACER, REAR WHEEL, 1-1/4"	2
178170	Wheel Stud	16
162432	Decal, Warning: Studs In This Brake Drum...	1
180015	Stud	16
179142	Decal, Wheel Nut Torque...	5
179141	Hex Flange Nut	32
F017989	Wheel Nut, 9/16"-18 RH	16
060814	Wheel Stop (weld on)	2
M007298	Spring, Extension	2
F019582	Clip	2
F001099	Cap Screw, 5/16-18 x 1" Hex Hd	2
F001100	SAE Lock Washer, 5/16"	2
F007021	Hex Nut, 5/16"-18	2
021870	Wheel Modification Application Drawing	

170051 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
170051	WHEEL MODIFICATION GROUP	1
137649	WHEEL, 19-1/2 x 6"	5
137648	Decal, Ratings Represent...	1
170774	Decal, Wheel Nut Torque 140 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
170736	Spacer, Front Wheel, 7/16"	2
170735	SPACER, REAR WHEEL, 1-1/4"	2
178170	Wheel Stud	16
162432	Decal, Warning: Studs In This Brake Drum...	1
180015	Stud	16
179142	Decal, Wheel Nut Torque...	5
179141	Hex Flange Nut	32
F017989	Wheel Nut, 9/16"-18 RH	16
170390	Wheel Stop (weld on)	2
M007298	Spring, Extension	2
F019582	Clip	2
F001099	Cap Screw, 5/16-18 x 1" Hex Hd	2
F001100	SAE Lock Washer, 5/16"	2
F007021	Hex Nut, 5/16"-18	2
137349	Spring, Compression	2
021871	Wheel Modification Application Drawing	

172501 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
172501	WHEEL MODIFICATION GROUP	1
133242	WHEEL, 19-1/2 x 6"	5
133243	Decal, Ratings Represent...	1
170774	Decal, Wheel Nut Torque 140 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire	1
184106	Hex Flange Nut	32
179142	Decal, Wheel Nut Torque...	5
169329	Decal, This Vehicle Is Equipped With...	2
F025796	Wheel Nut	16
171054	WHEEL SPACER, REAR	2
F026230	Wheel Stud	8
162432	Decal, Warning: Studs In This Brake Drum...	1
171051	Wheel Spacer, Front	2
F025952	Shock Absorber	2
169037	Bushing	4
169036	Tube	2
F002929	SAE Washer, 3/4"	16
044564	Bar	2
172498	Bar	2
021758	Wheel Modification Application Drawing	
022111	Steering Stop Application Drawing	

178154 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
178154	WHEEL MODIFICATION GROUP	1
178155	Wheel	5
135937	Washer	2
F019949k	Cone Nut, M12	20
188424	Wheel Stud	10
022507	Wheel Modification Application Drawing	

180025 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
180025	WHEEL MODIFICATION GROUP	1
181498	WHEEL, 19-1/2 x 6"	5
181508	Decal, Ratings Represent...	1
136140	Decal, Wheel Nut Torque 100 Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
022739	Wheel Modification Application Drawing	

184448 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
184448	WHEEL MODIFICATION GROUP	1
181612	WHEEL, 19-1/2 x 6"	5
184150	Decal, Ratings Represent...	1
184075	Decal, Wheel Nut Torque 175 Dry Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
186130	Spacer	2
184550	Hex Flange Nut	32
188359	Wheel Stop Assembly	2
F014801	Hose Clamp	3
F002355	Cap Screw, 1/4-20 x 3/4" GR 5 Hex Hd	3
F013588	Elastic Stop Nut, 1/4"-20	3
187235	Bar	2
187092	Bar	1
F019742	Cap Screw, 3/8-16 x 1-3/4" GR 8 Hex Hd	2
F011998	Elastic Stop Nut, 38-16	2
F006471	Cap Screw, 1/4-20 x 1-3/4" GR5 Hex Hd	2
023214	Wheel Modification Application Drawing	
023412	Steering Stop Application Drawing	

187299 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
187299	WHEEL MODIFICATION GROUP	1
187191	WHEEL, 19-1/2 x 6"	5
187194	Decal, Ratings Represent...	1
179142	Decal, Wheel Nut Torque 180-200 Dry Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
184106	Hex Flange Nut	32
116904	Bar	2
188431	Wheel Spacer	2
188432	Wheel Stud	16
188433	Tube	2
023275	Wheel Modification Application Drawing	
023428	Steering Stop Application Drawing	

188439 WHEEL MODIFICATION GROUP

PART NO	DESCRIPTION	QTY
188439	WHEEL MODIFICATION GROUP	1
181612	WHEEL, 19-1/2 x 6"	5
184150	Decal, Ratings Represent...	1
184075	Decal, Wheel Nut Torque 175 Dry Foot Pounds	1
161453	Decal, Warning: When Wheel/Tire...	1
186130	Spacer	2
184550	Hex Flange Nut	32
188436	Wheel Stop Assembly	1
188437	Wheel Stop Assembly	1
F014801	Hose Clamp	3
F002355	Cap Screw, 1/4-20 x 3/4" GR 5 Hex Hd	3
F013588	Elastic Stop Nut, 1/4"-20	3
187091	Bar	2
187092	Bar	1
F019742	Cap Screw, 3/8-16 x 1-3/4" GR 8 Hex Hd	4
F011998	Elastic Stop Nut, 3/8"-16	4
023414	Wheel Modification Application Drawing	
023413	Steering Stop Application Drawing	

121658 WHEEL HOUSING MODIFICATION GROUP - CHEVROLET AND GMC ONLY

PART NO	DESCRIPTION	QTY
121658	WHEEL HOUSING MODIFICATION GROUP	1
118074	Sheet, 4 x 53"	2
118075	Sheet, 4 x 6-1/2"	4
F009602	Self Tapping Screw, #10 x 1/2" Hex Flg Hd	120
F001118	Cap Screw, 5/16-18 x 1-1/2" Carriage Hd	6
F007120	Hex Grip Nut, 5/16"-18	6
F022221	Caulking	1
017280	Rear Wheel Housing Modification Drawing - Metal Floor	
017281	Rear Wheel Housing Modification Drawing - Wood Floor	

121659 WHEEL HOUSING MODIFICATION GROUP - FORD ONLY

PART NO	DESCRIPTION	QTY
121659	WHEEL HOUSING MODIFICATION GROUP	1
118016	Sheet, 4 x 15"	2
118017	Sheet, 4 x 17-1/2"	4
118018	Sheet, 1-1/2 x 6-1/2"	4
F009602	Self Tapping Screw, #10 x 1/2" Hex Flg Hd	120
F022221	Caulking	1
017271	Rear Wheel Housing Modification Drawing	

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Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1996 CHEV/GMC C20753 4 X 2 EXTENDED CAB 7,200 GVWR	1996 CHEV/GMC C20903 4 X 2 REGULAR AND CHASSIS CAB 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170021	170596
Rail Pilot Unit - Front or Rear	138090	138090
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GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1996 CHEV/GMC K20903 4 X 4 REGULAR AND CHASSIS CAB 8,600 GVWR	1996 CHEV/GMC C20906 4 X 2 SUBURBAN 8,600 GVWR
REQUIRED GROUPS		
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BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
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Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1996 CHEV/GMC C20953 4 X 2 EXTENDED CAB 8,600 GVWR	1996 CHEV/GMC C20953 4 X 2 EXTENDED CAB 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170596	170599
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Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1996 CHEV/GMC K20953 4 X 4 EXTENDED CAB 8,600 GVWR	1996 CHEV/GMC C30903 4 X 2 REGULAR AND CHASSIS CAB 9,000 GVWR
REQUIRED GROUPS		
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Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1996 CHEV/GMC C30943 4 X 2 CREW AND CHASSIS CAB 9,000 GVWR	1996 CHEV/GMC C30943 4 X 2 SIX MAN CREW CAB 9,000 / 9,600 / 10,000 GVWR HR1000A1 FRONT HR2000A3 REAR
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GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	———
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	———
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1997 CHEV/GMC T10506 4 X 4 BLAZER / JIMMY 5,300 GVWR	1997 CHEV/GMC S10803 4 X 2 REGULAR CAB 4,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	178159	171074
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	170768	171075
Steering Lock	169632	169632
Wheel Modification	178154	133315
Wheel Housing Modification	———	———
Application Drawing - Front	021915	021928
Application Drawing - Rear	021916	021929
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1997 CHEV/GMC C20753 4 X 2 EXTENDED CAB 7,200 GVWR	1997 CHEV/GMC K20753 4 X 4 EXTENDED CAB 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170021	170021
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	167879	167879
Steering Lock	169632	169632
Wheel Modification	168678	168678
Wheel Housing Modification	———	———
Application Drawing - Front	021716	021716
Application Drawing - Rear	021717	021717
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1997 CHEV/GMC C20903 4 X 2 REGULAR AND CHASSIS CAB 8,600 GVWR	1997 CHEV/GMC C20903 4 X 2 REGULAR AND CHASSIS CAB 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170596	170599
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	162452	162452
Steering Lock	169632	169632
Wheel Modification	162451	168290
Wheel Housing Modification	121658	121658
Application Drawing - Front	021266	021266
Application Drawing - Rear	021193	021193
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1997 CHEV/GMC K20903 4 X 4 REGULAR AND CHASSIS CAB 8,600 GVWR	1997 CHEV/GMC C20906 4 X 2 SUBURBAN 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170668	170671
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	169034	161285
Steering Lock	169632	169632
Wheel Modification	169031	162451
Wheel Housing Modification	———	121658
Application Drawing - Front	021629	021109
Application Drawing - Rear	021760	021110
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1997 CHEV/GMC C20953 4 X 2 EXTENDED CAB 8,600 GVWR	1997 CHEV/GMC C20953 4 X 2 EXTENDED CAB 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170596	170599
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	162452	162452
Steering Lock	169632	169632
Wheel Modification	162451	168290
Wheel Housing Modification	121658	121658
Application Drawing - Front	021266	021266
Application Drawing - Rear	021193	021193
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1997 CHEV/GMC K20953 4 X 4 EXTENDED CAB 8,600 GVWR	1997 CHEV/GMC C30903 4 X 2 REGULAR AND CHASSIS CAB 9,000 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170668	170694
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	169034	162452
Steering Lock	169632	169632
Wheel Modification	169031	168072
Wheel Housing Modification	———	121658
Application Drawing - Front	021629	021266
Application Drawing - Rear	021760	021193
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1997 CHEV/GMC C30943 4 X 2 CREW AND CHASSIS CAB 9,000 GVWR	1997 CHEV/GMC C30943 4 X 2 SIX MAN CREW CAB 9,000 / 9,600 / 10,000 GVWR HR1000A1 FRONT HR2000A3 REAR
REQUIRED GROUPS		
HY-RAIL® Application	170697	170698
Rail Pilot Unit - Front	138090	138090
Mounting Brackets	161286	164044
Steering Lock	169632	169632
Wheel Modification	159849	159849
Wheel Housing Modification	121658	121658
Application Drawing - Front	021109	021109
Application Drawing - Rear	021111	———
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	———
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	———
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1998 CHEV/GMC T10506 4 X 4 BLAZER / JIMMY 5,300 GVWR	1998 CHEV/GMC S10803 4 X 2 REGULAR CAB 4,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	178159	171074
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	170768	171075
Steering Lock	169632	169632
Wheel Modification	178154	133315
Wheel Housing Modification	———	———
Application Drawing - Front	021915	021928
Application Drawing - Rear	021916	021929
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1998 CHEV/GMC C20753 4 X 2 EXTENDED CAB 7,200 GVWR	1998 CHEV/GMC K20753 4 X 4 EXTENDED CAB 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170021	170021
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	167879	167879
Steering Lock	169632	169632
Wheel Modification	168678	169031
Wheel Housing Modification	———	———
Application Drawing - Front	021716	021716
Application Drawing - Rear	021717	021717
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1998 CHEV/GMC C20903 4 X 2 REGULAR AND CHASSIS CAB 8,600 GVWR	1998 CHEV/GMC C20903 4 X 2 REGULAR AND CHASSIS CAB 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170596	170599
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	162452	162452
Steering Lock	169632	169632
Wheel Modification	162451	168290
Wheel Housing Modification	121658	121658
Application Drawing - Front	021266	021266
Application Drawing - Rear	021193	021193
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

1998 CHEV/GMC
K20903 4 X 4
REGULAR AND
CHASSIS CAB
8,600 GVWR

REQUIRED GROUPS

HY-RAIL® Application	170668
Rail Pilot Unit - Front or Rear	138090
Mounting Brackets	169034
Steering Lock	169632
Wheel Modification	169031
Wheel Housing Modification	———
Application Drawing - Front	021629
Application Drawing - Rear	021760

GUIDE WHEEL OPTIONS

Steel Tread	138113
Rubber Tread	138093

BUMPER GROUPS

Front Only With Sight Rods	136033
Rear Only	139627

ACCESSORY GROUP OPTIONS

*	Rail Sweeps	138116
*	Derail Skids	137682
	Step Plates	139606
	Splash Guards - Front	140118
	Splash Guards - Rear	140390
	Wheel Weighing Jack	073527

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* Recommended Safety Option

	1998 CHEV/GMC C20906 4 X 2 SUBURBAN 8,600 GVWR	1998 CHEV/GMC K20906 4 X 4 SUBURBAN 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170671	180728
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	161285	180729
Steering Lock	169632	169632
Wheel Modification	162451	172501
Wheel Housing Modification	121658	———
Application Drawing - Front	021109	022663
Application Drawing - Rear	021110	021110
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1998 CHEV/GMC C20953 4 X 2 EXTENDED CAB 8,600 GVWR	1998 CHEV/GMC C20953 4 X 2 EXTENDED CAB 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170596	170599
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	162452	162452
Steering Lock	169632	169632
Wheel Modification	162451	168290
Wheel Housing Modification	121658	121658
Application Drawing - Front	021266	021266
Application Drawing - Rear	021193	021193
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1998 CHEV/GMC K20953 4 X 4 EXTENDED CAB 8,600 GVWR	1998 CHEV/GMC C30903 4 X 2 REGULAR AND CHASSIS CAB 9,000 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170668	170694
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	169034	162452
Steering Lock	169632	169632
Wheel Modification	169031	168072
Wheel Housing Modification	———	121658
Application Drawing - Front	021629	021266
Application Drawing - Rear	021760	021193
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1998 CHEV/GMC C30943 4 X 2 CREW AND CHASSIS CAB 9,000 GVWR	1998 CHEV/GMC C30943 4 X 2 SIX MAN CREW CAB 9,000 / 9,600 / 10,000 GVWR HR1000A1 FRONT HR2000A3 REAR
REQUIRED GROUPS		
HY-RAIL® Application	170697	170698
Rail Pilot Unit - Front	138090	138090
Mounting Brackets	161286	164044
Steering Lock	169632	169632
Wheel Modification	159849	159849
Wheel Housing Modification	121658	121658
Application Drawing - Front	021109	021109
Application Drawing - Rear	021111	———
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	———
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	———
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1999 CHEV/GMC T10506 4 X 4 BLAZER / JIMMY 5,300 GVWR	1999 CHEV/GMC C25753 4 X 2 EXTENDED CAB WITH 6-1/2' BOX 7,200 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	178159	188308
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	170768	187212
Steering Lock	169632	169632
Wheel Modification	178154	187299
Wheel Housing Modification	———	———
Application Drawing - Front	021915	023281
Application Drawing - Rear	021916	023283
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1999 CHEV/GMC C25903 4 X 2 REGULAR CAB WITH 8' BOX 7,200 GVWR	1999 CHEV/GMC C25903 4 X 2 REGULAR CAB WITH 8' BOX 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	188308	188308
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	187212	187212
Steering Lock	169632	169632
Wheel Modification	187299	187299
Wheel Housing Modification	———	———
Application Drawing - Front	023281	023281
Application Drawing - Rear	023283	023283
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1999 CHEV/GMC C25903 4 X 2 CHASSIS CAB 8,600 GVWR	1999 CHEV/GMC K25753 4 X 4 EXTENDED CAB WITH 6-1/2' BOX 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	188308	188307
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	187212	187210
Steering Lock	169632	169632
Wheel Modification	187299	187299
Application Drawing - Front	023281	023282
Application Drawing - Rear	023283	023283
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1999 CHEV/GMC C20903 4 X 2 REGULAR AND CHASSIS CAB 8,600 GVWR	1999 CHEV/GMC K20903 4 X 4 REGULAR AND CHASSIS CAB 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170596	170668
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	162452	169034
Steering Lock	169632	169632
Wheel Modification	162451	169031
Wheel Housing Modification	121658	———
Application Drawing - Front	021266	021629
Application Drawing - Rear	021193	021760
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1999 CHEV/GMC K25903 4 X 4 REGULAR CAB 8' BOX 8,600 GVWR	1999 CHEV/GMC C20906 4 X 2 SUBURBAN 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	188307	170671
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	187210	161285
Steering Lock	169632	169632
Wheel Modification	187299	162451
Wheel Housing Modification	———	121658
Application Drawing - Front	023282	021109
Application Drawing - Rear	023283	022110
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1999 CHEV/GMC K20906 4 X 4 SUBURBAN 8,600 GVWR	1999 CHEV/GMC C20953 4 X 2 EXTENDED CAB 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	180728	170596
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	180729	162452
Steering Lock	169632	169632
Wheel Modification	172501	162451
Wheel Housing Modification	———	121658
Application Drawing - Front	022663	021266
Application Drawing - Rear	022110	021193
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1999 CHEV/GMC K20953 4 X 4 EXTENDED CAB 8,600 GVWR	1999 CHEV/GMC K25953 4 X 4 EXTENDED CAB WITH 8' BOX 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170668	188307
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	169034	187210
Steering Lock	169632	169632
Wheel Modification	169031	187299
Wheel Housing Modification	———	———
Application Drawing - Front	021629	023282
Application Drawing - Rear	021760	023283
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1999 CHEV/GMC C30903 4 X 2 REGULAR AND CHASSIS CAB WITH SRW 9,000 GVWR	1999 CHEV/GMC C30943 4 X 2 CREW CAB WITH SRW 9,000 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170694	170697
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	162452	161286
Steering Lock	169632	169632
Wheel Modification	168072	159849
Wheel Housing Modification	121658	121658
Application Drawing - Front	021266	021109
Application Drawing - Rear	021193	021111
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

1999 CHEV/GMC
C30943 4 X 2
SIX MAN
CREW CAB
9,000 / 9,600
10,000 GVWR
HR1000A1 FRONT
HR2000A3 REAR

REQUIRED GROUPS

HY-RAIL® Application	170698
Rail Pilot Unit - Front	138090
Mounting Brackets	164044
Steering Lock	169632
Wheel Modification	159849
Wheel Housing Modification	121658
Application Drawing - Front	021109
Application Drawing - Rear	———

GUIDE WHEEL OPTIONS

Steel Tread	138113
Rubber Tread	138093

BUMPER GROUPS

Front Only With Sight Rods	136033
Rear Only	———

ACCESSORY GROUP OPTIONS

*	Rail Sweeps	138116
*	Derail Skids	137682
	Step Plates	139606
	Splash Guards - Front	140118
	Splash Guards - Rear	———
	Wheel Weighing Jack	073527

* Recommended Safety Option

	2000 CHEV/GMC T10506 4 X 4 BLAZER / JIMMY 5,300 GVWR	2000 CHEV/GMC C25753 4 X 2 EXTENDED CAB PICKUP WITH 6-1/2' BOX 7,200 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	178159	188308
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	170768	187212
Steering Lock	169632	169632
Wheel Modification	178154	187299
Wheel Housing Modification	———	———
Application Drawing - Front	021915	023281
Application Drawing - Rear	021916	023283
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	2000 CHEV/GMC C25903 4 X 2 REGULAR CAB WITH 8' BOX 7,200 GVWR	2000 CHEV/GMC C25903 4 X 2 REGULAR CAB WITH 8' BOX 8,600 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	188308	188308
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	187212	187212
Steering Lock	169632	169632
Wheel Modification	187299	187299
Wheel Housing Modification	———	———
Application Drawing - Front	023281	023281
Application Drawing - Rear	023283	023283
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	2000 CHEV/GMC C25953 4 X 2 EXTENDED CAB WITH 8' BOX 8,600 GVWR	2000 CHEV/GMC C30903 4 X 2 CHASSIS CAB WITH SRW 9,000 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	188308	170694
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	187212	162452
Steering Lock	169632	169632
Wheel Modification	187299	168072
Wheel Housing Modification	———	121658
Application Drawing - Front	023281	021266
Application Drawing - Rear	023283	021193
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	2000 CHEV/GMC C30943 4 X 2 CREW CAB WITH SRW 9,000 GVWR	2000 CHEV/GMC C30903 4 X 2 6 MAN CREW AND CHASSIS CAB 9,000 / 9,200 / 10,000 GVWR HR1000A1 FRONT HR2000A3 REAR
REQUIRED GROUPS		
HY-RAIL® Application	170697	170698
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	161286	164044
Steering Lock	169632	169632
Wheel Modification	159849	159849
Wheel Housing Modification	121658	121658
Application Drawing - Front	021109	021109
Application Drawing - Rear	021111	———
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	———
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	———
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1996 DODGE DAKOTA 4 X 2 REGULAR AND CLUB CAB 6,100 GVWR	1996 DODGE DAKOTA 4 X 4 REGULAR AND CLUB CAB 5,870 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	168015	168016
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	157291	157011
Steering Lock	168097	168097
Wheel Modification	156086	———
Application Drawing - Front	020833	020787
Application Drawing - Rear	020492	020492
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1997 DODGE DAKOTA 4 X 2 REGULAR AND CLUB CAB 6,100 GVWR	1997 DODGE DAKOTA 4 X 4 REGULAR AND CLUB CAB 5,990 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	178174	178128
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	178177	178131
Steering Lock	168097	168097
Wheel Modification	———	———
Application Drawing - Front	022497	022482
Application Drawing - Rear	022498	022483
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1998 DODGE DAKOTA 4 X 2 REGULAR AND CLUB CAB 6,100 GVWR	1998 DODGE DAKOTA 4 X 4 REGULAR AND CLUB CAB 5,990 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	178174	178128
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	178177	178131
Steering Lock	168097	168097
Wheel Modification	_____	_____
Application Drawing - Front	022497	022482
Application Drawing - Rear	022498	022483
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

1998 DODGE
DURANGO 4 X 4
6,400 GVWR

REQUIRED GROUPS

HY-RAIL® Application 181699
Rail Pilot Unit - Front or Rear 138090
Mounting Brackets 181700
Steering Lock 168097
Wheel Modification . . . . . ———
Application Drawing - Front 023505
Application Drawing - Rear 023506

GUIDE WHEEL OPTIONS

Steel Tread 138113
Rubber Tread 138093

BUMPER GROUPS

Front Only With Sight Rods 136033
Rear Only 139627

ACCESSORY GROUP OPTIONS

* Rail Sweeps 138116
* Derail Skids 137682
Step Plates 139606
Splash Guards - Front 140118
Splash Guards - Rear 140390
Wheel Weighing Jack 073527

* Recommended Safety Option

	1999 DODGE DAKOTA 4 X 2 REGULAR AND CLUB CAB 6,100 GVWR	1999 DODGE DAKOTA 4 X 4 REGULAR AND CLUB CAB 5,990 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	178174	192367
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	178177	192368
Steering Lock	168097	168097
Wheel Modification	———	———
Application Drawing - Front	022497	022482
Application Drawing - Rear	022498	022483
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

1999 DODGE
DURANGO 4 X 4
6,400 GVWR

REQUIRED GROUPS

HY-RAIL® Application 181699
Rail Pilot Unit - Front or Rear 138090
Mounting Brackets 181700
Steering Lock 168097
Wheel Modification . . . . . ———
Application Drawing - Front 023505
Application Drawing - Rear 023506

GUIDE WHEEL OPTIONS

Steel Tread 138113
Rubber Tread 138093

BUMPER GROUPS

Front Only With Sight Rods 136033
Rear Only 139627

ACCESSORY GROUP OPTIONS

* Rail Sweeps 138116
* Derail Skids 137682
Step Plates 139606
Splash Guards - Front 140118
Splash Guards - Rear 140390
Wheel Weighing Jack 073527

* Recommended Safety Option

	2000 DODGE DAKOTA 4 X 2 REGULAR AND CLUB CAB 6,100 GVWR	2000 DODGE DAKOTA 4 X 4 REGULAR AND CLUB CAB 5,990 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	178174	192367
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	178177	192368
Steering Lock	168097	168097
Wheel Modification	———	———
Application Drawing - Front	022497	022482
Application Drawing - Rear	022498	022483
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

2000 DODGE
DURANGO 4 X 4
6,400 GVWR

REQUIRED GROUPS

HY-RAIL® Application 181699
Rail Pilot Unit - Front or Rear 138090
Mounting Brackets 181700
Steering Lock 168097
Wheel Modification . . . . . ———
Application Drawing - Front 023505
Application Drawing - Rear 023506

GUIDE WHEEL OPTIONS

Steel Tread 138113
Rubber Tread 138093

BUMPER GROUPS

Front Only With Sight Rods 136033
Rear Only 139627

ACCESSORY GROUP OPTIONS

* Rail Sweeps 138116
* Derail Skids 137682
Step Plates 139606
Splash Guards - Front 140118
Splash Guards - Rear 140390
Wheel Weighing Jack 073527

* Recommended Safety Option

	1996 FORD EXPLORER 4 X 4 4 DOOR 5,640 GVWR	1996 FORD BRONCO 4 X 4 6,300 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170678	164589
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	170677	159315
Steering Lock	168091	168091
Wheel Modification	———	163620
Wheel Housing Modification	———	121659
Application Drawing - Front	021889	021006
Application Drawing - Rear	020693	020405
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1996 FORD F150 4 X 2 REGULAR CAB STYLESIDE 6,100 / 6,250 GVWR	1996 FORD F150 4 X 2 SUPER CAB STYLESIDE 6,050 / 6,250 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	164487	168095
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	161646	161646
Steering Lock	168091	168091
Wheel Modification	161642	163620
Wheel Housing Modification	121659	121659
Application Drawing - Front	021150	021351
Application Drawing - Rear	020281	021353
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1996 FORD F150 4 X 4 REGULAR CAB STYLESIDE 6,100 / 6,250 GVWR	1996 FORD F150 4 X 4 SUPER CAB STYLESIDE 6,100 / 6,250 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	164588	164588
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	159021	159021
Steering Lock	168091	168091
Wheel Modification	163620	163620
Wheel Housing Modification	121659	121659
Application Drawing - Front	020975	020975
Application Drawing - Rear	020281	020281
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1996 FORD F250 HD 4 X 2 REGULAR CAB STYLESIDE 8,600 GVWR	1996 FORD F250 HD 4 X 4 SUPER CAB STYLESIDE 8,800 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	164590	164590
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	159102	159102
Steering Lock	158687	158687
Wheel Modification	137353	137353
Wheel Housing Modification	121659	121659
Application Drawing - Front	021000	021000
Application Drawing - Rear	020281	020281
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1996 FORD F250 HD 4 X 4 REGULAR CAB STYLESIDE 8,600 GVWR	1996 FORD F250 HD 4 X 4 SUPER CAB STYLESIDE 8,800 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170389	170389
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	159020	159020
Steering Lock	158687	158687
Wheel Modification	170050	170050
Wheel Housing Modification	121659	121659
Application Drawing - Front	020974	020974
Application Drawing - Rear	020208	020208
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1996 FORD F350 4 X 2 CREW CAB STYLESIDE WITH SRW 9,200 GVWR	1996 FORD F350 4 X 4 REGULAR CAB STYLESIDE WITH SRW 9,000 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	164592	170393
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	159102	159020
Steering Lock	158687	158687
Wheel Modification	137353	170051
Wheel Housing Modification	121659	121659
Application Drawing - Front	021000	020974
Application Drawing - Rear	020281	020208
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

1996 FORD
F350 4 X 4
CREW CAB
STYLESIDE
WITH SRW
9,200 GVWR

REQUIRED GROUPS

HY-RAIL® Application 170393
Rail Pilot Unit - Front or Rear 138090
Mounting Brackets 159020
Steering Lock 158687
Wheel Modification 170051
Wheel Housing Modification 121659
Application Drawing - Front 020974
Application Drawing - Rear 020208

GUIDE WHEEL OPTIONS

Steel Tread 138113
Rubber Tread 138093

BUMPER GROUPS

Front Only With Sight Rods 136033
Rear Only 139627

ACCESSORY GROUP OPTIONS

* Rail Sweeps 138116
* Derail Skids 137682
Step Plates 139606
Splash Guards - Front 140118
Splash Guards - Rear 140390
Wheel Weighing Jack 073527

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* Recommended Safety Option

1997 FORD
EXPLORER 4 X 4
4 DOOR
5,640 GVWR

REQUIRED GROUPS

HY-RAIL® Application 170678
Rail Pilot Unit - Front or Rear 138090
Mounting Brackets 170677
Steering Lock 168691
Wheel Modification . . . . . ———
Wheel Housing Modification . . . . . ———
Application Drawing - Front 022304
Application Drawing - Rear 022305

GUIDE WHEEL OPTIONS

Steel Tread 138113
Rubber Tread 138093

BUMPER GROUPS

Front Only With Sight Rods 136033
Rear Only 139627

ACCESSORY GROUP OPTIONS

* Rail Sweeps 138116
* Derail Skids 137682
Step Plates 139606
Splash Guards - Front 140118
Splash Guards - Rear 140390
Wheel Weighing Jack 073527

* Recommended Safety Option

	1997 FORD F250 HD 4 X 2 REGULAR CAB STYLESIDE 8,600 GVWR	1997 FORD F250 HD 4 X 2 SUPER CAB STYLESIDE 8,800 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	164590	164590
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	159102	159102
Steering Lock	158687	158687
Wheel Modification	137353	137353
Wheel Housing Modification	121659	121659
Application Drawing - Front	021000	021000
Application Drawing - Rear	020281	020281
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1997 FORD F250 HD 4 X 4 REGULAR CAB STYLESIDE 8,600 GVWR	1997 FORD F250 HD 4 X 4 SUPER CAB STYLESIDE 8,800 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170389	170389
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	159020	159020
Steering Lock	158687	158687
Wheel Modification	170050	170050
Wheel Housing Modification	121659	121659
Application Drawing - Front	020974	020974
Application Drawing - Rear	020208	020208
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1997 FORD F350 4 X 4 REGULAR CAB STYLESIDE WITH SRW 9,000 GVWR	1997 FORD F350 4 X 2 CREW CAB STYLESIDE WITH SRW 9,200 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170393	164592
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	159020	159102
Steering Lock	158687	158687
Wheel Modification	170051	137353
Wheel Housing Modification	121659	121659
Application Drawing - Front	020974	021000
Application Drawing - Rear	020208	020281
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

1997 FORD
F350 4 X 4
CREW CAB
STYLESIDE
WITH SRW
9,200 GVWR

REQUIRED GROUPS

HY-RAIL® Application 170393
Rail Pilot Unit - Front or Rear 138090
Mounting Brackets 159020
Steering Lock 158687
Wheel Modification 170051
Wheel Housing Modification 121659
Application Drawing - Front 020974
Application Drawing - Rear 020208

GUIDE WHEEL OPTIONS

Steel Tread 138113
Rubber Tread 138093

BUMPER GROUPS

Front Only With Sight Rods 136033
Rear Only 139627

ACCESSORY GROUP OPTIONS

* Rail Sweeps 138116
* Derail Skids 137682
Step Plates 139606
Splash Guards - Front 140118
Splash Guards - Rear 140390
Wheel Weighing Jack 073527

* Recommended Safety Option

1998 FORD
EXPLORER 4 X 4
4 DOOR
5,520 GVWR

REQUIRED GROUPS

HY-RAIL® Application 181636
Rail Pilot Unit - Front or Rear 138090
Mounting Brackets 170677
Steering Lock 181548
Wheel Modification . . . . . ———
Wheel Housing Modification . . . . . ———
Application Drawing - Front 021889
Application Drawing - Rear 020693

GUIDE WHEEL OPTIONS

Steel Tread 138113
Rubber Tread 138093

BUMPER GROUPS

Front Only With Sight Rods 136033
Rear Only 139627

ACCESSORY GROUP OPTIONS

* Rail Sweeps 138116
* Derail Skids 137682
Step Plates 139606
Splash Guards - Front 140118
Splash Guards - Rear 140390
Wheel Weighing Jack 073527

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* Recommended Safety Option

	1998 FORD F250 LD 4 X 2 REGULAR CAB STYLESIDE 7,700 GVWR	1998 FORD F250 LD 4 X 2 SUPER CAB STYLESIDE 7,500 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	180039	180039
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	180040	180040
Steering Lock	181548	181548
Wheel Modification	180025	180025
Wheel Housing Modification	121659	121659
Application Drawing - Front	022651	022651
Application Drawing - Rear	022652	022652
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1998 FORD F250 LD 4 X 4 REGULAR CAB STYLESIDE 7,700 GVWR	1998 FORD F250 LD 4 X 4 SUPER CAB STYLESIDE 7,700 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	180039	180039
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	180040	180040
Steering Lock	181548	181548
Wheel Modification	180025	180025
Wheel Housing Modification	121659	121659
Application Drawing - Front	022651	022651
Application Drawing - Rear	022652	022652
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

1999 FORD
EXPLORER 4 X 4
4 DOOR
5,520 GVWR

REQUIRED GROUPS

HY-RAIL® Application	188336
Rail Pilot Unit - Front or Rear	138090
Mounting Brackets	188337
Steering Lock	181548
Wheel Modification	———
Wheel Housing Modification	———
Application Drawing - Front	023297
Application Drawing - Rear	020693

GUIDE WHEEL OPTIONS

Steel Tread	138113
Rubber Tread	138093

BUMPER GROUPS

Front Only With Sight Rods	136033
Rear Only	139627

ACCESSORY GROUP OPTIONS

*	Rail Sweeps	138116
*	Derail Skids	137682
	Step Plates	139606
	Splash Guards - Front	140118
	Splash Guards - Rear	140390
	Wheel Weighing Jack	073527

* Recommended Safety Option

	1999 FORD F250 LD 4 X 2 REGULAR CAB STYLESIDE 7,700 GVWR	1999 FORD F250 LD 4 X 2 SUPER CAB STYLESIDE 7,500 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	180039	180039
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	180040	180040
Steering Lock	181548	181548
Wheel Modification	180025	180025
Wheel Housing Modification	121659	121659
Application Drawing - Front	022651	022651
Application Drawing - Rear	022652	022652
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1999 FORD F250 LD 4 X 4 REGULAR CAB STYLESIDE 7,700 GVWR	1999 FORD F250 LD 4 X 4 SUPER CAB STYLESIDE 7,700 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	180039	180039
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	180040	180040
Steering Lock	181548	181548
Wheel Modification	180025	180025
Wheel Housing Modification	121659	121659
Application Drawing - Front	022651	022651
Application Drawing - Rear	022652	022652
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1999 FORD F250 HD 4 X 2 REGULAR CAB PICKUP 8,800 GVWR	1999 FORD F250 HD 4 X 2 SUPER CAB PICKUP 8,800 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184531	184531
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184532	184532
Steering Lock	181548	181548
Wheel Modification	184448	184448
Wheel Housing Modification	121659	121659
Application Drawing - Front	023064	023064
Application Drawing - Rear	023065	023065
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1999 FORD F250 HD 4 X 2 CREW CAB PICKUP 8,800 GVWR	1999 FORD F250 HD 4 X 4 REGULAR CAB PICKUP 8,800 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184531	184527
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184532	184528
Steering Lock	181548	181548
Wheel Modification	184448	188439
Wheel Housing Modification	121659	121659
Application Drawing - Front	023064	023066
Application Drawing - Rear	023065	023067
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1999 FORD F250 HD 4 X 4 SUPER CAB PICKUP 8,800 GVWR	1999 FORD F250 HD 4 X 4 CREW CAB PICKUP 8,800 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184527	184527
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184528	184528
Steering Lock	181548	181548
Wheel Modification	188439	188439
Wheel Housing Modification	121659	121659
Application Drawing - Front	023066	023066
Application Drawing - Rear	023067	023067
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1999 FORD F350 4 X 2 REGULAR CAB PICKUP WITH SRW 9,900 GVWR	1999 FORD F350 4 X 2 SUPER CAB PICKUP WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184531	184531
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184532	184532
Steering Lock	181548	181548
Wheel Modification	184448	184448
Wheel Housing Modification	121659	121659
Application Drawing - Front	023064	023064
Application Drawing - Rear	023065	023065
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1999 FORD F350 4 X 2 CREW CAB PICKUP WITH SRW 9,900 GVWR	1999 FORD F350 4 X 4 REGULAR CAB PICKUP WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184531	184527
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184532	184528
Steering Lock	181548	181548
Wheel Modification	184448	188439
Wheel Housing Modification	121659	121659
Application Drawing - Front	023064	023066
Application Drawing - Rear	023065	023067
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1999 FORD F350 4 X 4 SUPER CAB PICKUP WITH SRW 9,900 GVWR	1999 FORD F350 4 X 4 CREW CAB PICKUP WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184527	184527
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184528	184528
Steering Lock	181548	181548
Wheel Modification	188439	188439
Wheel Housing Modification	121659	121659
Application Drawing - Front	023066	023066
Application Drawing - Rear	023067	023067
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1999 FORD F350 4 X 2 REGULAR CHASSIS CAB WITH SRW 9,900 GVWR	1999 FORD F350 4 X 2 SUPER CHASSIS CAB WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	187122	187122
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	187123	187123
Steering Lock	181548	181548
Wheel Modification	184448	184448
Wheel Housing Modification	———	———
Application Drawing - Front	023064	023064
Application Drawing - Rear	023207	023207
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1999 FORD F350 4 X 2 CREW CHASSIS CAB WITH SRW 9,900 GVWR	1999 FORD F350 4 X 4 REGULAR CHASSIS CAB WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	187122	187120
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	187123	187121
Steering Lock	181548	181548
Wheel Modification	184448	188439
Wheel Housing Modification	———	———
Application Drawing - Front	023064	023066
Application Drawing - Rear	023207	023207
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1999 FORD F350 4 X 4 SUPER CHASSIS CAB WITH SRW 9,900 GVWR	1999 FORD F350 4 X 4 CREW CHASSIS CAB WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	187120	187120
Rail Pilot Unit - Front	138090	138090
Mounting Brackets	187121	187121
Steering Lock	181548	181548
Wheel Modification	188493	188439
Wheel Housing Modification	———	———
Application Drawing - Front	023066	023066
Application Drawing - Rear	023207	023207
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

2000 FORD
EXPLORER 4 X 4
4 DOOR
5,440 GVWR

REQUIRED GROUPS

HY-RAIL® Application	188336
Rail Pilot Unit - Front or Rear	138090
Mounting Brackets	188337
Steering Lock	181548
Wheel Modification	———
Wheel Housing Modification	———
Application Drawing - Front	023297
Application Drawing - Rear	020693

GUIDE WHEEL OPTIONS

Steel Tread	138113
Rubber Tread	138093

BUMPER GROUPS

Front Only With Sight Rods	136033
Rear Only	139627

ACCESSORY GROUP OPTIONS

*	Rail Sweeps	138116
*	Derail Skids	137682
	Step Plates	139606
	Splash Guards - Front	140118
	Splash Guards - Rear	140390
	Wheel Weighing Jack	073527

* Recommended Safety Option

	2000 FORD F250 HD 4 X 2 REGULAR CAB PICKUP 8,800 GVWR	2000 FORD F250 HD 4 X 2 SUPER CAB PICKUP 8,800 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184531	184531
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184532	184532
Steering Lock	181548	181548
Wheel Modification	184448	184448
Wheel Housing Modification	121659	121659
Application Drawing - Front	023064	023064
Application Drawing - Rear	023065	023065
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	2000 FORD F250 HD 4 X 2 CREW CAB PICKUP 8,800 GVWR	2000 FORD F250 HD 4 X 4 REGULAR CAB PICKUP 8,800 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184531	184527
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184532	184528
Steering Lock	181548	181548
Wheel Modification	184448	188439
Wheel Housing Modification	121659	121659
Application Drawing - Front	023064	023066
Application Drawing - Rear	023065	023067
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	2000 FORD F250 HD 4 X 4 SUPER CAB PICKUP 8,800 GVWR	2000 FORD F250 HD 4 X 4 CREW CAB PICKUP 8,800 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184527	184527
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184528	184528
Steering Lock	181548	181548
Wheel Modification	188439	188439
Wheel Housing Modification	121659	121659
Application Drawing - Front	023066	023066
Application Drawing - Rear	023067	023067
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	2000 FORD F350 4 X 2 REGULAR CAB PICKUP WITH SRW 9,900 GVWR	2000 FORD F350 4 X 2 SUPER CAB PICKUP WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184531	184531
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184532	184532
Steering Lock	181548	181548
Wheel Modification	184448	184448
Wheel Housing Modification	121659	121659
Application Drawing - Front	023064	023064
Application Drawing - Rear	023065	023065
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	2000 FORD F350 4 X 2 CREW CAB PICKUP WITH SRW 9,900 GVWR	2000 FORD F350 4 X 4 REGULAR CAB PICKUP WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184531	184527
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184532	184528
Steering Lock	181548	181548
Wheel Modification	184448	188439
Wheel Housing Modification	121659	121659
Application Drawing - Front	023064	023066
Application Drawing - Rear	023065	023067
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	2000 FORD F350 4 X 4 SUPER CAB PICKUP WITH SRW 9,900 GVWR	2000 FORD F350 4 X 4 CREW CAB PICKUP WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	184527	184527
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	184528	184528
Steering Lock	181548	181548
Wheel Modification	188439	188439
Wheel Housing Modification	121659	121659
Application Drawing - Front	023066	023066
Application Drawing - Rear	023067	023067
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	2000 FORD F350 4 X 2 REGULAR CHASSIS CAB WITH SRW 9,900 GVWR	2000 FORD F350 4 X 2 SUPER CHASSIS CAB WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	187122	187122
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	187123	187123
Steering Lock	181548	181548
Wheel Modification	184448	184448
Wheel Housing Modification	———	———
Application Drawing - Front	023064	023064
Application Drawing - Rear	023207	023207
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	2000 FORD F350 4 X 2 CREW CHASSIS CAB WITH SRW 9,900 GVWR	2000 FORD F350 4 X 4 REGULAR CHASSIS CAB WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	187122	187120
Rail Pilot Unit - Front or Rear	138090	138090
Mounting Brackets	187123	187121
Steering Lock	181548	181548
Wheel Modification	184448	188439
Wheel Housing Modification	———	———
Application Drawing - Front	023064	023066
Application Drawing - Rear	023207	023207
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	2000 FORD F350 4 X 4 SUPER CHASSIS CAB WITH SRW 9,900 GVWR	2000 FORD F350 4 X 4 CREW CHASSIS CAB WITH SRW 9,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	187120	187120
Rail Pilot Unit - Front	138090	138090
Mounting Brackets	187121	187121
Steering Lock	181548	181548
Wheel Modification	188493	188439
Wheel Housing Modification	———	———
Application Drawing - Front	023066	023066
Application Drawing - Rear	023207	023207
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

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* Recommended Safety Option

	1996 JEEP CHEROKEE 4 X 4 4,900 GVWR	1997 JEEP CHEROKEE 4 X 4 4,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170758	170758
Rail Pilot Unit - Front	138090	138090
Mounting Brackets	154090	154090
Steering Lock	170715	170715
Wheel Modification	138109	138109
Wheel Housing Modification	———	———
Application Drawing - Front	021710	020412
Application Drawing - Rear	021711	020413
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

	1998 JEEP CHEROKEE 4 X 4 4,900 GVWR	1999 JEEP CHEROKEE 4 X 4 4,900 GVWR
REQUIRED GROUPS		
HY-RAIL® Application	170758	170758
Rail Pilot Unit - Front	138090	138090
Mounting Brackets	154090	154090
Steering Lock	170715	170715
Wheel Modification	138109	138109
Wheel Housing Modification	———	———
Application Drawing - Front	020412	020412
Application Drawing - Rear	020413	020413
GUIDE WHEEL OPTIONS		
Steel Tread	138113	138113
Rubber Tread	138093	138093
BUMPER GROUPS		
Front Only With Sight Rods	136033	136033
Rear Only	139627	139627
ACCESSORY GROUP OPTIONS		
* Rail Sweeps	138116	138116
* Derail Skids	137682	137682
Step Plates	139606	139606
Splash Guards - Front	140118	140118
Splash Guards - Rear	140390	140390
Wheel Weighing Jack	073527	073527

* Recommended Safety Option

2000 JEEP
CHEROKEE 4 X 4
4,900 GVWR

REQUIRED GROUPS

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