

SERVICE REPAIR

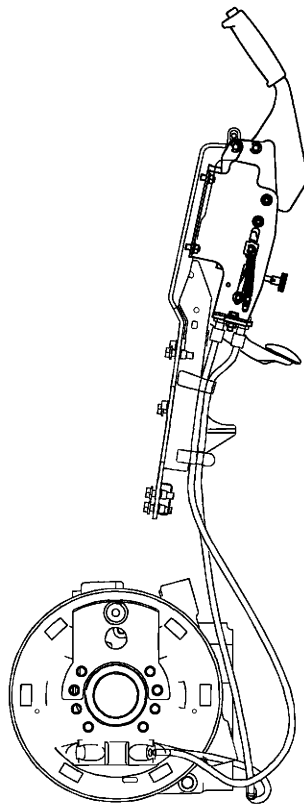
MANUAL

Hyster G001 (H30-35FT, H40FTS) Internal Combustion
Engine Trucks Service Repair Manual

HYSTER

BRAKE SYSTEM

**S30-35FT, S40FTS [F010];
H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS)
[G001];
S50CT [B267];
H2.0-2.5CT (H50CT) [B274];
S2.0-3.5FT (S40-70FT, S55FTS) [H187];
H2.0-3.5FT (H40-70FT) [P177]**



HYSTER

SAFETY PRECAUTIONS

MAINTENANCE AND REPAIR

- The Service Manuals are updated on a regular basis, but may not reflect recent design changes to the product. Updated technical service information may be available from your local authorized Hyster® dealer. Service Manuals provide general guidelines for maintenance and service and are intended for use by trained and experienced technicians. Failure to properly maintain equipment or to follow instructions contained in the Service Manual could result in damage to the products, personal injury, property damage or death.
- When lifting parts or assemblies, make sure all slings, chains, or cables are correctly fastened, and that the load being lifted is balanced. Make sure the crane, cables, and chains have the capacity to support the weight of the load.
- Do not lift heavy parts by hand, use a lifting mechanism.
- Wear safety glasses.
- DISCONNECT THE BATTERY CONNECTOR before doing any maintenance or repair on electric lift trucks. Disconnect the battery ground cable on internal combustion lift trucks.
- Always use correct blocks to prevent the unit from rolling or falling. See HOW TO PUT THE LIFT TRUCK ON BLOCKS in the **Operating Manual** or the **Periodic Maintenance** section.
- Keep the unit clean and the working area clean and orderly.
- Use the correct tools for the job.
- Keep the tools clean and in good condition.
- Always use **HYSTER APPROVED** parts when making repairs. Replacement parts must meet or exceed the specifications of the original equipment manufacturer.
- Make sure all nuts, bolts, snap rings, and other fastening devices are removed before using force to remove parts.
- Always fasten a DO NOT OPERATE tag to the controls of the unit when making repairs, or if the unit needs repairs.
- Be sure to follow the **WARNING** and **CAUTION** notes in the instructions.
- Gasoline, Liquid Petroleum Gas (LPG), Compressed Natural Gas (CNG), and Diesel fuel are flammable. Be sure to follow the necessary safety precautions when handling these fuels and when working on these fuel systems.
- Batteries generate flammable gas when they are being charged. Keep fire and sparks away from the area. Make sure the area is well ventilated.

NOTE: The following symbols and words indicate safety information in this manual:



WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury and property damage.

On the lift truck, the **WARNING** symbol and word are on orange background. The **CAUTION** symbol and word are on yellow background.

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This section is for the following models:

(S30-35FT, S40FTS) [F010];
H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) [G001];
(S50CT) [B267];
H2.0-2.5CT (H50CT) [B274];
S2.0-3.5FT (S40-70FT, S55FTS) [H187];
H2.0-3.5FT (H40-70FT) [P177]

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NOTE:

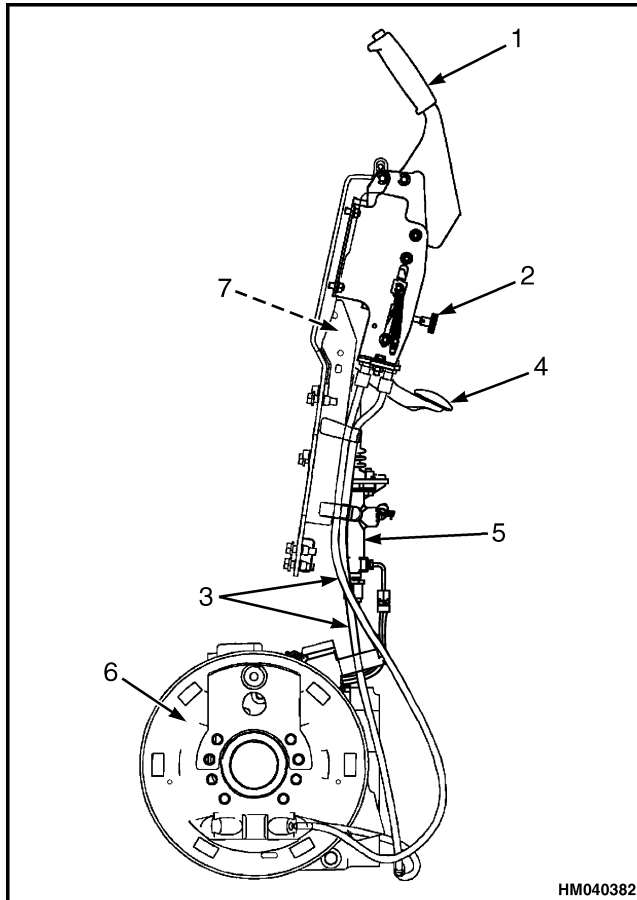
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**Have any questions please write to me:
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General

DRY BRAKE SYSTEM

This section has service procedures for dry brake system. Dry brake system includes the following parts: master cylinder, brake shoes, wheel cylinders, and parking brake system. See Figure 1.



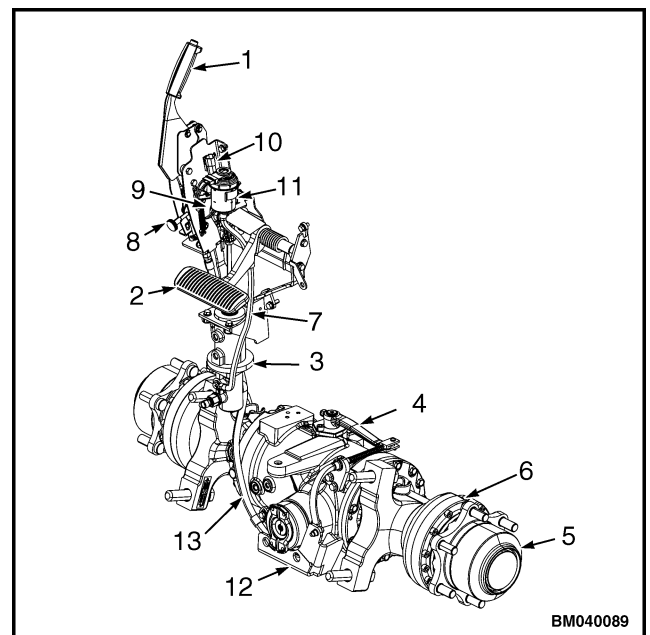
1. PARK BRAKE LEVER
2. ADJUSTMENT KNOB
3. PARK BRAKE CABLES
4. INCHING/BRAKE PEDAL
5. MASTER CYLINDER
6. BRAKE ASSEMBLY
7. BRAKE POSITION SENSOR (RIGHT HAND SIDE)

Figure 1. Brake System

WET BRAKE SYSTEM

Wet brake system in this section includes the following parts: master cylinder and parking brake system. See Figure 2.

Wet disc brakes are a component of wet brake drive axle. Brake discs are located inside planetary carrier housing on left side of drive axle. See **Drive Axle Repair (Wet Brake) 1400SRM1679** for remove and install procedures. See Figure 2.



1. PARK BRAKE HAND LEVER
2. INCH/BRAKE PEDAL
3. MASTER CYLINDER AND BOOSTER
4. PARK BRAKE LEVER
5. WET DISC BRAKE HOUSING
6. PLANETARY CARRIER HOUSING (RIGHT SIDE SHOWN)
7. BRAKE OIL SUPPLY HOSE
8. ADJUSTMENT KNOB
9. BRAKE POSITION SENSOR
10. BRAKE POSITION SENSOR CONNECTOR
11. BRAKE OIL RESERVOIR
12. PARKING BRAKE CABLE BRACKET
13. PARKING BRAKE CABLE

Figure 2. Wet Brake System for Lift Truck Model H2.0-3.5FT (H40-70FT) (P177)

Service Brakes Repair (Dry Brake)

REMOVE AND DISASSEMBLE



WARNING

Brake linings can contain dangerous fibers. Breathing the dust from these brake linings is a cancer or lung disease hazard. **DO NOT** create dust! **DO NOT** clean brake parts with compressed air or by brushing. Use vacuum equipment approved for brake dust or follow the cleaning procedure in this section. When the brake drums are removed, **DO NOT** create dust.

DO NOT sand, grind, chisel, hammer, or change linings in any way that will create dust. Any changes to brake linings must be done in a restricted area with special ventilation. Protective clothing and a respirator must be used.

1. Remove capscrews that hold axle shaft to the hub. Remove axle shaft.
2. See procedure How to Put Lift Truck on Blocks in **Periodic Maintenance** for your lift truck or **Operating Manual** for your lift truck. Put lift truck on blocks so drive wheels can be removed. Remove drive wheels.
3. Perform following steps for lift truck models

- S50CT (B267)
- H2.0-2.5CT (H50CT) (B274)

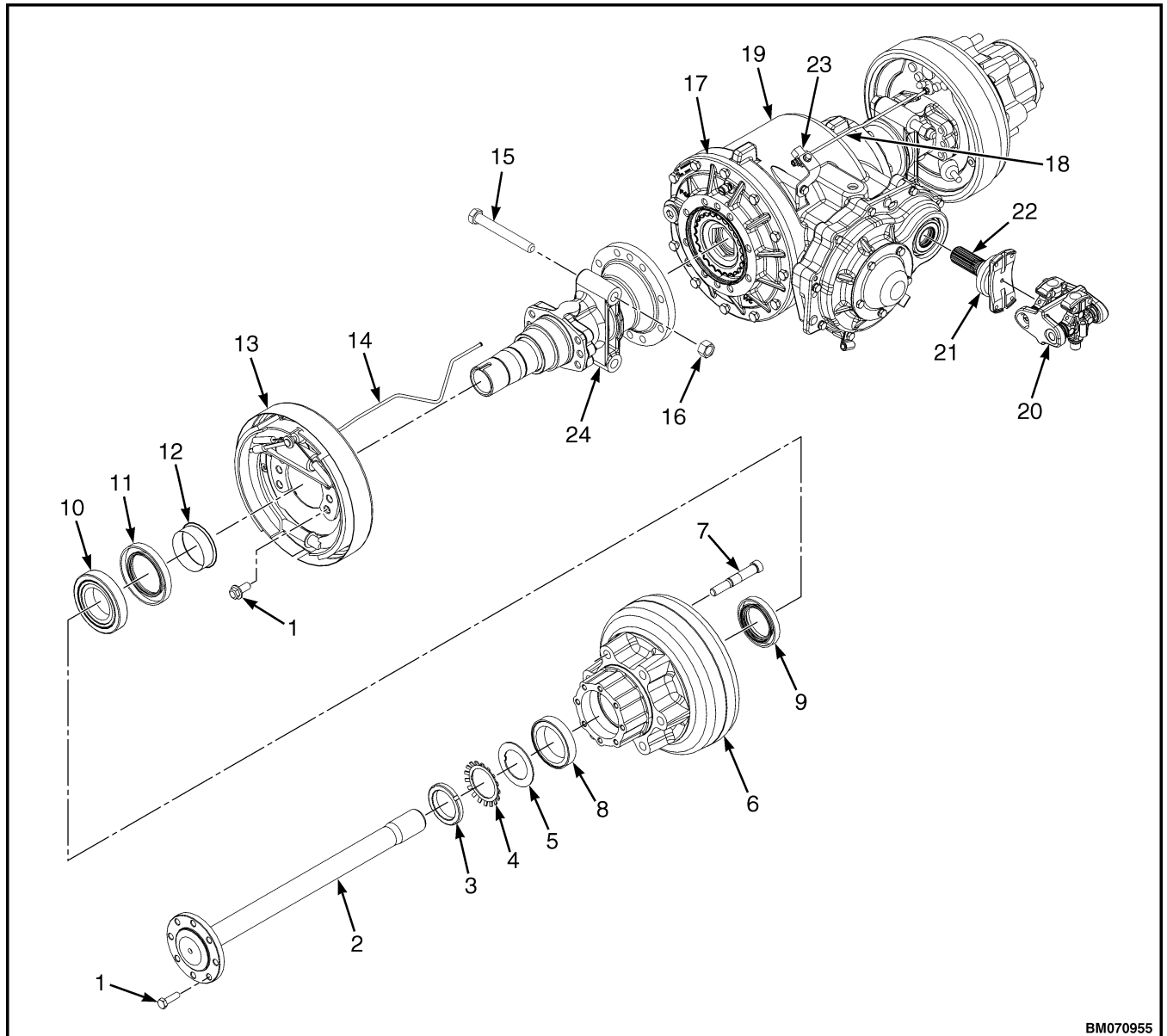
- a. Bend bearing lockwasher tabs to release locknut.
- b. Remove nut, lockwasher, locknut, and roller bearing from hub/brake assembly. See Figure 3.



WARNING

When the brake shoes are removed, do not create dust in the air. See the Clean procedure in this section.

- c. Pull wheel assembly from lift truck. If wheel assembly cannot be removed easily, use a small screwdriver to push adjuster actuator away from adjuster wheel. Use a brake adjustment tool or a screwdriver to turn adjuster wheel to loosen brake shoes. Remove hub and drum assembly. **DO NOT** damage grease seal when removing hub.
- d. Remove inner oil seal, inner bearing, and wear sleeve from hub. See Figure 3.



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- | | |
|-----------------------|---|
| 1. CAPSCREW | 13. BRAKE ASSEMBLY |
| 2. DRIVE AXLE SHAFT | 14. LEFT BRAKE LINE |
| 3. LOCKNUT | 15. DRIVE AXLE MOUNTING CAPSCREW |
| 4. BEARING LOCKWASHER | 16. DRIVE AXLE MOUNTING NUT |
| 5. WASHER | 17. DIFFERENTIAL COVER |
| 6. HUB/BRAKE ASSEMBLY | 18. RIGHT BRAKE LINE |
| 7. HUB BOLT | 19. DRIVE AXLE CENTER SECTION UNIVERSAL JOINT |
| 8. ROLLER BEARING | 20. UNIVERSAL JOINT |
| 9. OUTER SEAL | 21. DUST COVER |
| 10. INNER BEARING | 22. INPUT SHAFT (YOKE) |
| 11. INNER OIL SEAL | 23. BRAKE MANIFOLD |
| 12. WEAR SLLEEVE | 24. HANGER ASSEMBLY |

Figure 3. Drive Axle Components, Lift Truck Models S50CT (B267) and H2.0-2.5CT (H50CT) (B274)

4. Perform following steps for lift truck models
- S30-35FT, S40FTS (F010)
 - H1.6-1.8FT, H2.0FT (H30-35FT, H40FTS) (G001)
 - S2.0-3.5FT (S40-70FT, S55FTS) (H187)
 - H2.0-3.5FT (H40-70FT) (P177)
- a. Bend lock plate and remove nut that holds axle bearing. Remove washer and bearing cone.

**WARNING**

When the brake shoes are removed, **DO NOT create dust in the air. See the Clean procedure in this section.**

- b. Pull wheel assembly from lift truck. If wheel assembly cannot be removed easily, use a small screwdriver to push adjuster actuator away from adjuster wheel. Use a brake adjustment tool or a screwdriver to turn adjuster wheel to loosen brake shoes. Remove hub and drum assembly. **DO NOT** damage grease seal when removing hub.

NOTE: Note arrangement of brake parts during disassembly to aid in assembly.

5. Remove return springs with spring pliers.

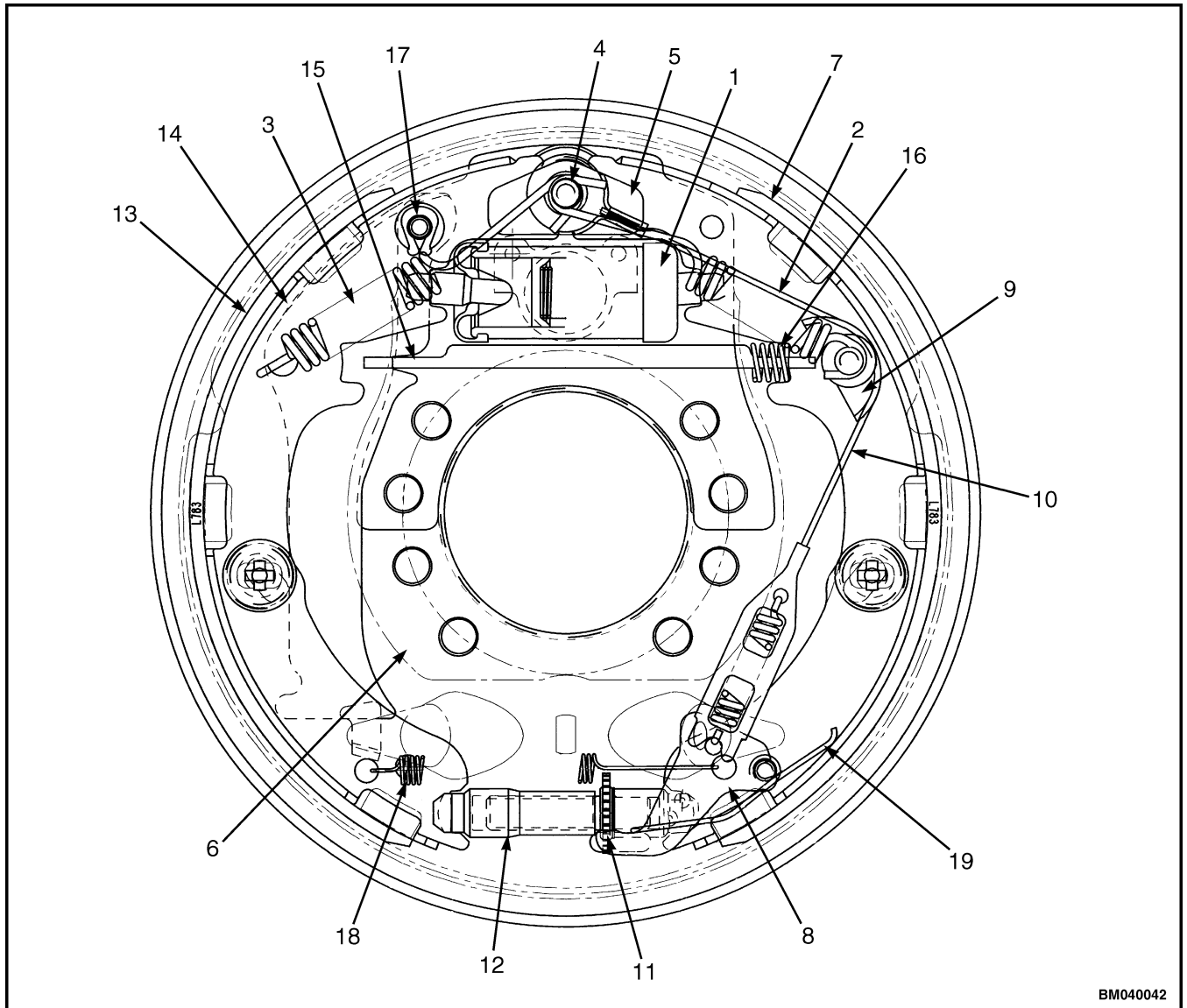
See Figure 4 and Figure 5 for lift truck models

- S2.0-3.5FT (S40-70FT, S55FTS) (H187)
- H2.0-3.5FT (H40-70FT) (P177)

See Figure 6 and Figure 7 for lift truck models

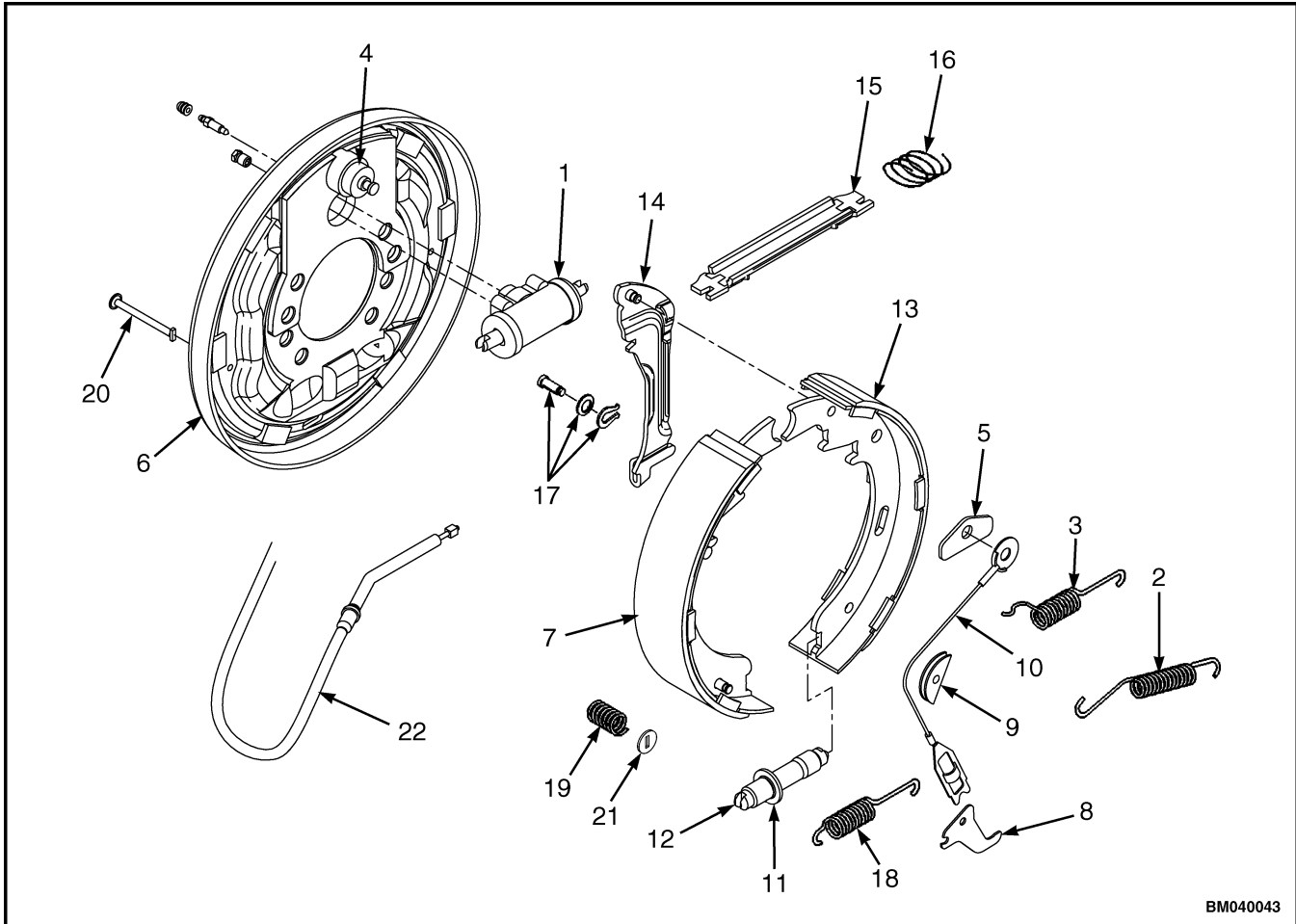
- S30-35FT, S40FTS (F010)
- H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)

- S50CT [B267]
 - H2.0-2.5CT (H50CT) (B274)
6. Remove retainers, springs, and anchor pins that hold brake shoes to back plate.
7. Disengage link from adjuster wheel actuator. Remove link, washer, and pivot plate. Remove anchor guide.
8. Move brake shoes away from each other to disengage brake shoes from wheel cylinder. Disconnect parking brake lever from parking brake cable as brake assembly is removed from back plate. Parking brake lever has a hook that engages parking brake cable.
- NOTE:** Adjuster wheel for left brake is not same as adjuster wheel for right brake. Adjuster wheel for left brake has left-hand threads.
9. Remove parking brake link and spring if they are still engaged with brake shoes. Parking brake link and spring will often fall from brake assembly when brake assembly is removed from back plate. Adjuster wheel will also disengage from brake shoes after brake assembly is removed.
10. Remove spring for adjuster wheel actuator. Remove adjuster wheel actuator from brake shoe.
11. Use a screwdriver or small pry bar to move apart ends of retainer. Remove spring washer and pivot pin to remove parking brake lever from brake shoe.
12. Disconnect brake line from wheel cylinder. Remove capscrews that hold wheel cylinder to back plate and remove wheel cylinder.



- | | |
|-------------------------------|--|
| 1. WHEEL CYLINDER | 11. ADJUSTER WHEEL |
| 2. RETURN SPRING | 12. ADJUSTER ASSEMBLY |
| 3. RETURN SPRING | 13. PRIMARY BRAKE SHOE |
| 4. ANCHOR | 14. PARKING BRAKE LEVER |
| 5. ANCHOR GUIDE | 15. LINK, PARKING BRAKE |
| 6. BACK PLATE | 16. SPRING, PARKING BRAKE |
| 7. SECONDARY BRAKE SHOE | 17. PIVOT PIN, RETAINER, AND SPRING WASHER |
| 8. LEVER | 18. ADJUSTER ACTUATOR SPRING |
| 9. PIVOT PLATE | 19. SPRING |
| 10. SPRING AND CABLE ASSEMBLY | |

Figure 4. Brake Assembly (Left-Hand Shown), S2.0-3.5FT (S40-70FT, S55FTS (H187) and H2.0-3.5FT (H40-70FT) (P177)

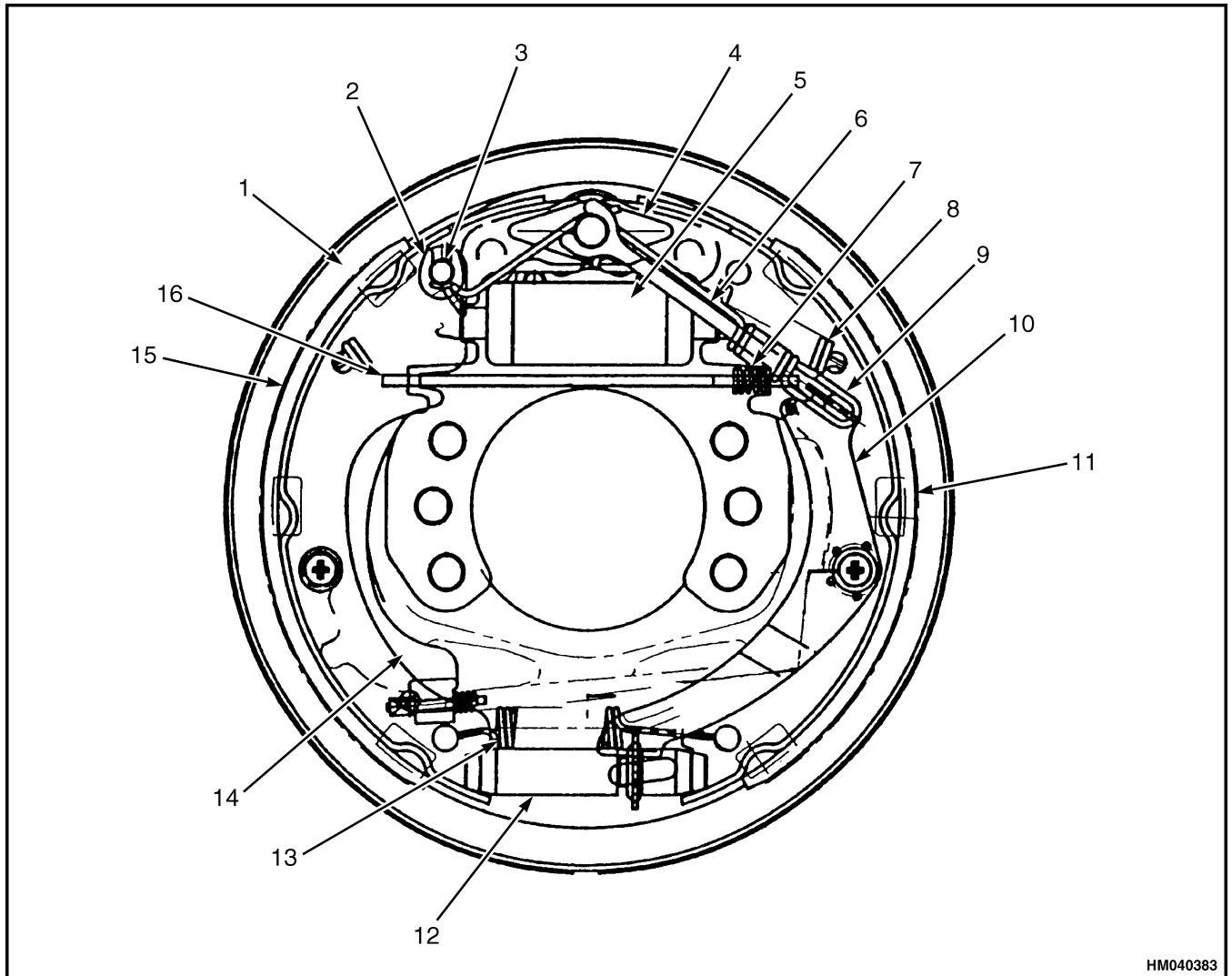


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NOTE: RIGHT-HAND BRAKE ASSEMBLY SHOWN.

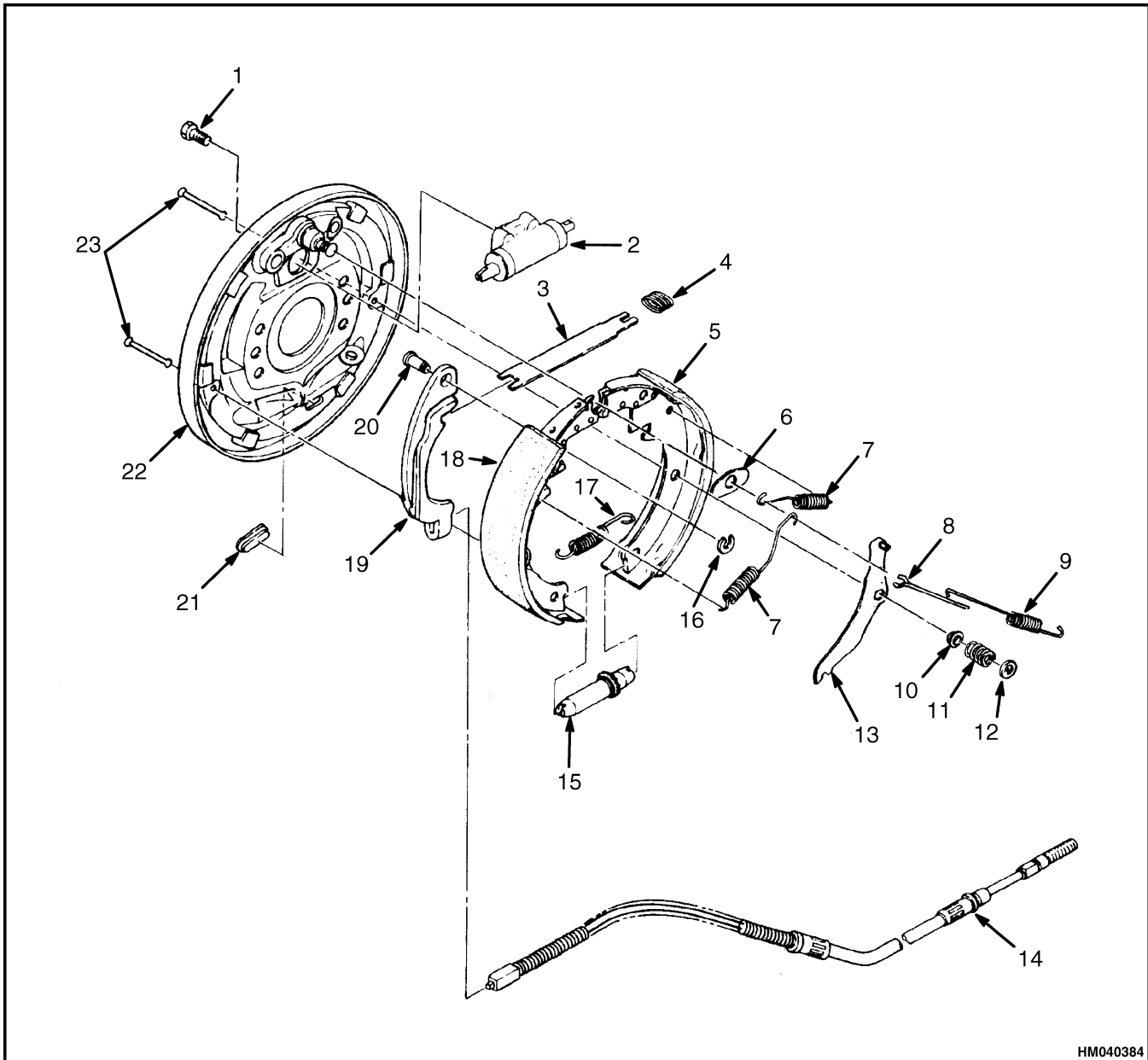
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|----------------------------|--|
| 1. WHEEL CYLINDER | 12. ADJUSTER ASSEMBLY |
| 2. RETURN SPRING | 13. PRIMARY BRAKE SHOE |
| 3. RETURN SPRING | 14. PARKING BRAKE LEVER |
| 4. ANCHOR | 15. PARKING BRAKE LINK |
| 5. ANCHOR GUIDE | 16. PARKING BRAKE SPRING |
| 6. BACK PLATE | 17. PIVOT PIN, RETAINER, AND SPRING WASHER |
| 7. SECONDARY BRAKE SHOE | 18. ADJUSTER ACTUATOR SPRING |
| 8. LEVER | 19. SPRING |
| 9. PIVOT PLATE | 20. RETAINING PIN |
| 10. ADJUSTER ACTUATOR LINK | 21. RETAINING WASHER |
| 11. ADJUSTER WHEEL | 22. PARKING BRAKE CABLE |

Figure 5. Service Brake Parts, S2.0-3.5FT (S40-70FT, S55FTS (H187) and H2.0-3.5FT (H40-70FT) (P177)



- | | |
|-------------------------|--------------------------|
| 1. BACKING PLATE | 9. SPRING (ACTUATOR) |
| 2. RETAINING RING | 10. PAWL LEVER |
| 3. LEVER PIN | 11. SECONDARY BRAKE SHOE |
| 4. GUIDE PLATE | 12. ADJUSTER ASSEMBLY |
| 5. WHEEL CYLINDER | 13. ADJUSTER SPRING |
| 6. PAWL LEVER STOPPER | 14. PARK BRAKE LEVER |
| 7. SPRING (ANTI-RATTLE) | 15. PRIMARY BRAKE SHOE |
| 8. RETURN SPRING | 16. STRUT |

Figure 6. Brake Assembly (Left Hand Side), S30-35FT, S40FTS (F010), H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001), S50CT (B267), and H2.0-2.5CT (H50CT) (B274)



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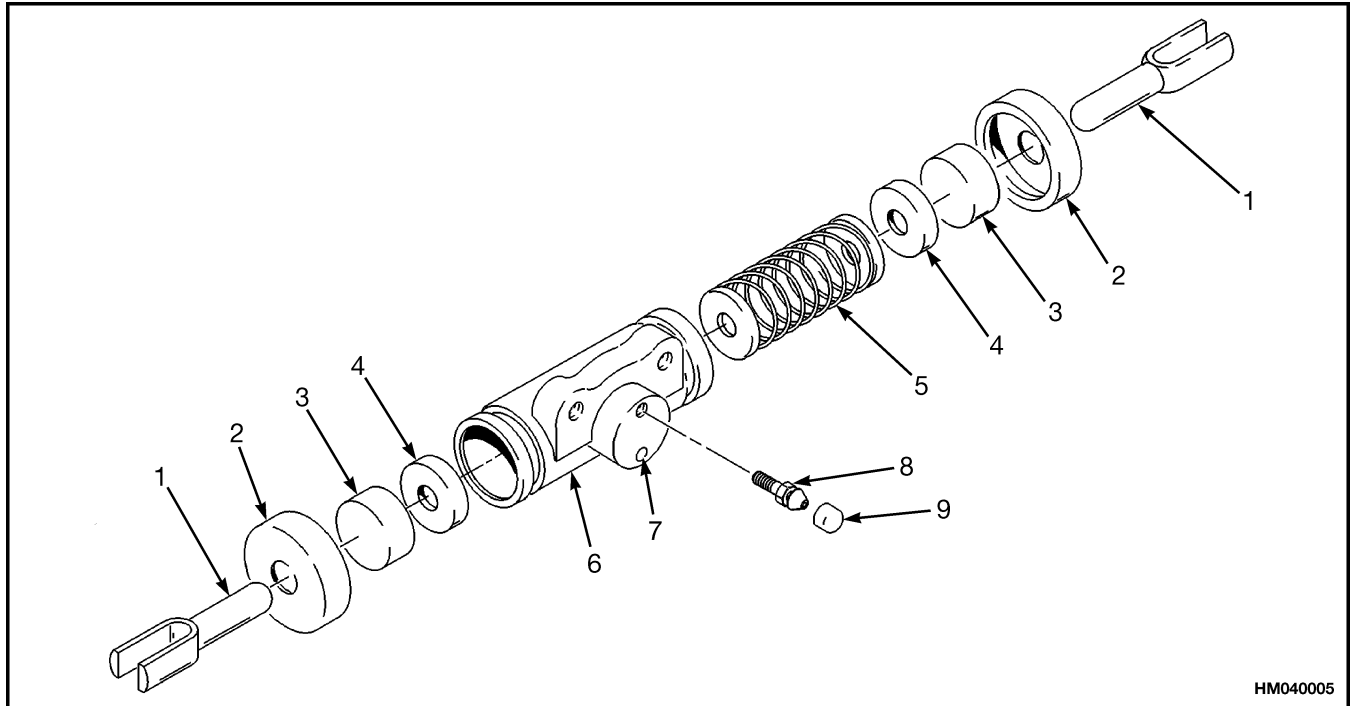
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|-----------------------------|------------------------|
| 1. BOLT | 13. PAWL LEVER |
| 2. WHEEL CYLINDER | 14. PARK BRAKE CABLE |
| 3. STRUT | 15. ADJUSTER ASSEMBLY |
| 4. SPRING | 16. PLUG |
| 5. SECONDARY BRAKE SHOE | 17. SPRING (ADJUSTER) |
| 6. PLATE | 18. PRIMARY BRAKE SHOE |
| 7. SPRING | 19. PARK BRAKE LEVER |
| 8. LEVER (STOP) | 20. PIN |
| 9. SPRING | 21. PLUG |
| 10. WASHER | 22. BACKING PLATE |
| 11. SPRING (SHOE HOLD DOWN) | 23. PIN |
| 12. WASHER | |

Figure 7. Service Brake Parts, S30-35FT, S40FTS (F010), H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001), S50CT (B267), and H2.0-2.5CT (H50CT) (B274)

NOTE: Back plate is not normally removed from axle housing for brake repairs. Special capscrews are used to fasten back plate to axle mount, and locking function of capscrews is reduced if they are removed.

13. Remove special capscrews if necessary.

14. Remove push rods, dust covers, pistons, cups, and spring from wheel cylinder. See Figure 8.



1. PUSH ROD (2)
2. DUST COVER (2)
3. PISTON (2)
4. CUP (2)
5. SPRING

6. WHEEL CYLINDER BODY
7. INLET PORT
8. PRESSURE BLEEDER
9. DUST COVER

Figure 8. Wheel Cylinder

CLEAN



WARNING

DO NOT use an oil solvent to clean the master cylinder, wheel cylinder, or brake linings. Use a solvent approved for cleaning of brake parts. **DO NOT** permit oil or grease in the brake fluid or on the brake linings. Oil and grease will cause damage and leaks in the seals of a brake system. The brakes will not operate correctly if oil, grease, or brake fluid is on the brake linings.

Cleaning solvents can be flammable and toxic and can cause skin irritation. When using cleaning solvents, always follow the safety instructions of the solvent manufacturer.

1. **DO NOT** release brake lining dust from brake linings into the air when brake drum is removed.
2. Use a solvent approved for cleaning of brake parts to wet brake lining dust. Follow instructions and cautions of manufacturer for use of solvent. If a solvent spray is used, spray at a distance so that dust is not released into the air.
3. When brake lining dust is wet, clean parts. Put any cloth or towels in a plastic bag or an airtight container while they are still wet. Put a **DANGEROUS FIBERS** warning label on plastic bag or airtight container.

**CAUTION**

DO NOT permit oil or grease on the brake linings. Use a brake cleaning fluid as necessary to clean linings that will not be replaced.

- Any cleaning cloths that will be washed must be cleaned so that fibers are not released into the air.

INSPECT

- Inspect the bore of wheel cylinder for holes or scratches. Replace wheel cylinder assembly if there is any damage.
- Inspect return springs for wear and damage. Inspect back plate for wear where brake shoes touch back plate. Remove any grooves or replace a worn or damaged back plate.

**WARNING**

The brake shoes on both wheels must be replaced if any shoe is damaged. The brake performance on both ends of an axle must be equal, or the lift truck can be difficult to steer when the brakes are applied.

- Inspect brake shoes for cracks or damage. If linings or shoes are worn or damaged, replace brake shoes. Maximum wear is to within 1 mm (0.039 in.) of contact with rivets, or metal shoe on bonded linings. Brake shoes must be replaced in complete sets. Inspect brake drums for cracks or damage. Replace any damaged parts.
- Inspect brake drum for deep grooves or other damage.

NOTE: If grooves must be removed from brake drums, DO NOT grind more than 1.5 mm (0.060 in.) from internal diameter of brake drum.

Maximum limit of internal diameter of the brake drum is 312 mm (12.28 in.) for lift truck models

- S2.0-3.5FT (S40-70FT, S55FSTS (H187)
- H2.0-3.5FT (H40-70FT) (P177)

Maximum limit of internal diameter of brake drum is 255.5 mm (10.06 in.) for lift truck models

- S30-35FT, S40FSTS (F010)
- H1.6-1.8FT, H2.0FSTS (H30-35FT, H40FSTS) (G001)
- S50CT (B267)
- H2.0-2.5CT (H50CT) (B274)

If internal diameter is larger than the limit, replace brake drum.

- The teeth of adjuster wheel must not be worn. Adjuster wheel must turn freely. Check adjuster links for damage.
- Make sure parking brake cables are in good condition.
- Check grease seals and surfaces of seals for wear or damage.

ASSEMBLE AND INSTALL

- If removed, install back plate to drive axle. Tighten special screws as indicated below:
 - Eight special capscrews are tightened to 255 to 306 N•m (188 to 226 lbf ft) for lift truck models
 - S2.0-3.5FT (S40-70FT, S55FSTS (H187)
 - H2.0-3.5FT (H40-70FT) (P177)

- b. Six special capscrews are tightened to 152 to 167 N•m (112 to 123 lbf ft) for lift truck models
 - S30-35FT, S40FTS (F010)
 - H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)
 - S50CT (B267)
 - H2.0-2.5CT (H50CT) (B274)
2. If wheel cylinder was disassembled for repair, assemble wheel cylinder. See Figure 8. Use only **HYSTER APPROVED** parts.
3. Install wheel cylinder on back plate and tighten two capscrews to 18 to 27 N•m (13 to 20 lbf ft). Connect brake line to wheel cylinder.
4. Install parking brake lever. Use pivot pin, spring washer, and retainer to fasten parking brake lever to brake shoe. Close ends of retainer to fasten pivot pin in position.

See Figure 5 for lift truck models

 - S2.0-3.5FT (S40-70FT, S55FTS (H187)
 - H2.0-3.5FT (H40-70FT) (P177)

See Figure 7 for lift truck models

 - S30-35FT, S40FTS (F010)
 - H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)
 - S50CT (B267)
 - H2.0-2.5CT (H50CT) (B274)
5. Fasten adjuster actuator spring to adjuster wheel actuator and brake shoe.
6. Put antiseize compound on threads of adjuster wheel. Turn the adjuster wheel into adjuster nut so that adjuster assembly is in its shortest position. This action permits brake drum to be easily installed over brake shoes.



WARNING

The threads of the adjuster wheel are not the same for each side. If the adjuster assemblies are installed on the wrong side, the brake shoe clearance will increase each time the brakes are applied. The adjuster wheel for the right brake has right-hand threads. The adjuster wheel for the left brake has left-hand threads.

7. Install adjuster wheel between two brake shoes. Make sure adjuster wheel will be toward rear of lift truck. Move brake shoes apart so that adjuster wheel is held in position and adjuster actuator spring is in tension.
8. Lubricate back plate with a small amount of lithium grease where brake shoes touch. Install brake shoes on anchor and engage the push rods of wheel cylinder. Engage the parking brake lever in slot in parking brake cable as brake shoes are installed on back plate.
9. Put an anchor pin, that holds brake shoes, through back plate. Put a spring seat, spring, and retainer on anchor pin. Push retainer onto anchor pin and rotate retainer 90 degrees. Make sure retainer is in correct position.
10. Install link, parking brake, and spring between parking brake lever and brake shoe.
11. Install other spring retainer, that holds brake shoes. Make sure parking brake link and spring are correctly engaged after spring retainers are installed.
12. Install anchor guide on anchor. Install pivot plate on its anchor.
13. Lubricate adjuster cable where it slides in pivot plate groove.
14. Fasten link to adjuster wheel actuator and put cable around pivot plate. Raise adjuster wheel actuator against spring tension and connect link to anchor.



WARNING

For S2.0-3.5FT (S40-70FT, S55FTS (H187) and H2.0-3.5FT (H40-70FT) (P177): Be sure to install the white return spring first and then the black return spring. See Figure 10. Improper assembly can result in brake failure and/or component damage.

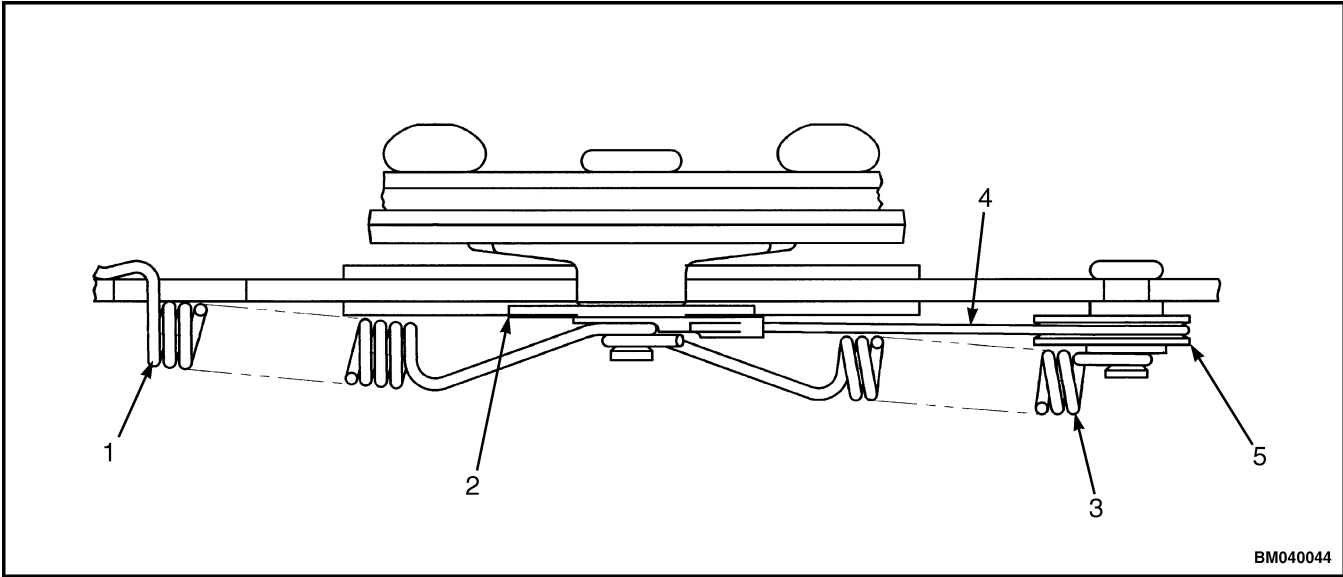
NOTE: The shape of return springs permits them to be installed correctly in only one position. The arrangement of return springs on anchors is shown in Figure 9 and Figure 10 for lift truck models

- S2.0-3.5FT (S40-70FT, S55FTS (H187)
- H2.0-3.5FT (H40-70FT) (P177)

15. Using correct tools, install return springs as follows:

- a. Install white spring.
- b. Install black spring.

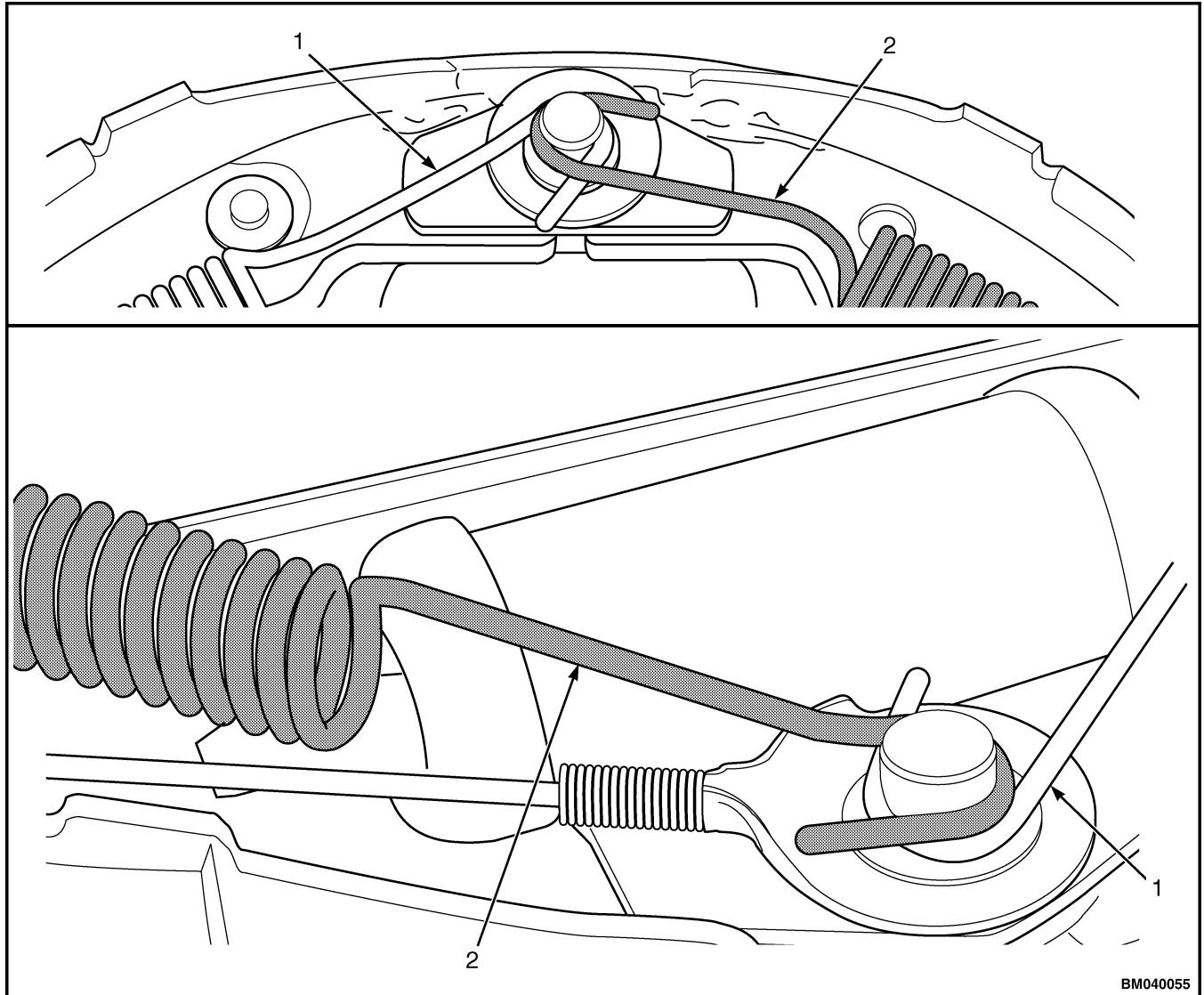
c. Verify that return springs are properly installed as shown in Figure 10.



- 1. RETURN SPRING
- 2. ANCHOR GUIDE
- 3. RETURN SPRING

- 4. ADJUSTER ACTUATOR LINK
- 5. PIVOT PLATE

Figure 9. Return Springs, S2.0-3.5FT (S40-70FT, S55FTS (H187) and H2.0-3.5FT (H40-70FT) (P177)



1. WHITE SPRING

2. BLACK SPRING

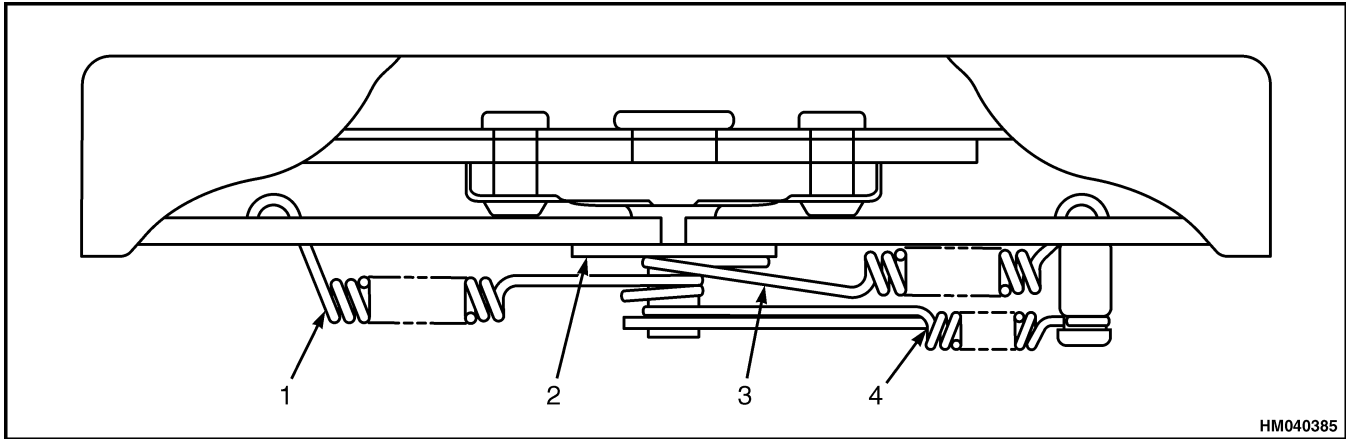
Figure 10. Proper Installation of Return Springs, S2.0-3.5FT (S40-70FT, S55FTS (H187) and H2.0-3.5FT (H40-70FT) (P177)

NOTE: The shape of return springs permits them to be installed correctly in only one position. The arrangement of return springs on anchors is shown in Figure 11 for lift truck models

- S30-35FT, S40FTS (F010)
- H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)
- S50CT (B267)
- H2.0-2.5CT (H50CT) (B274)

16. Using correct tools, install return springs as follows:

- a. Install return spring.
- b. Install washer.
- c. Install return spring.
- d. Verify that return springs are properly installed as shown in Figure 11.



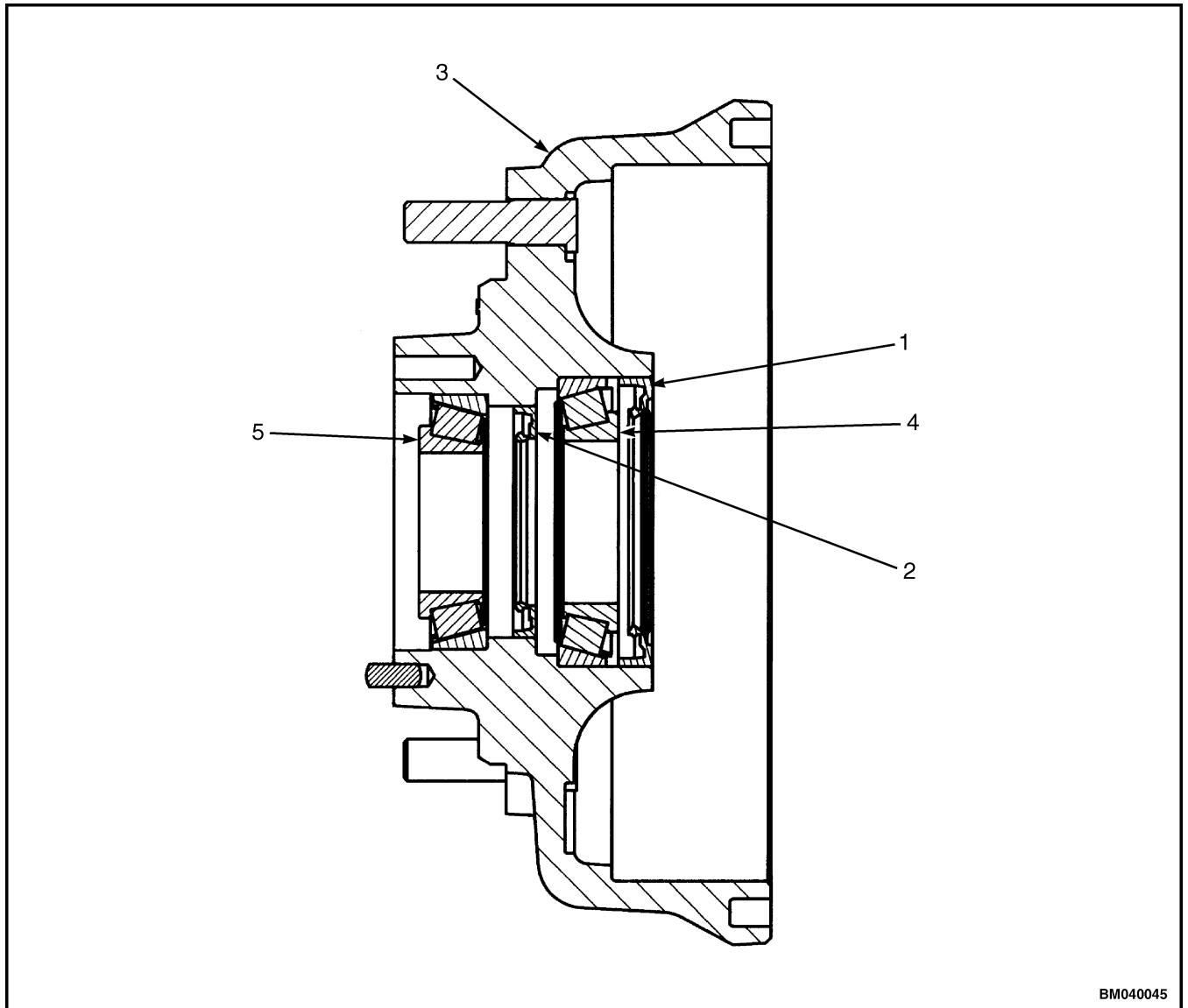
1. RETURN SPRING
2. GUIDE PLATE

3. RETURN SPRING
4. SPRING ACTUATOR

Figure 11. Return Springs, S30-35FT, S40FTS (F010), H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001), S50CT (B267), and H2.0-2.5CT (H50CT) (B274)

NOTE: Seal and bearings are to be installed flush with hub. Seal is to be installed with no grease or oil on outside surface.

17. Clean bearings and lubricate them with wheel bearing grease. Install bearings and seals in brake drum. Install assembly on axle housing. See Figure 12 and Figure 13.



BM040045

- 1. INNER SEAL
- 2. OUTER SEAL
- 3. BRAKE DRUM

- 4. INNER BEARING
- 5. OUTER BEARING

Figure 12. Grease Seals and Bearing Locations

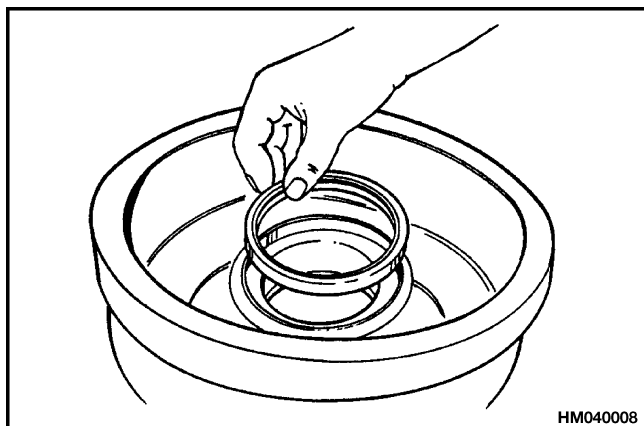


Figure 13. Inner Oil Seal Installation

NOTE: To prevent damage to inner oil seal when installing hub, hub and drum assembly can be temporarily fastened to the wheel. Align height of axle housing with hub bearings. Put grease under wheel and slide wheel toward axle housing.

18. Install outer bearing and nut, for lift truck models

- S30-35FT, S40FTS (F010)
- H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)
- S2.0-3.5FT (S40-70FT, S55FTS (H187)
- H2.0-3.5FT (H40-70FT) (P177)

Install wear sleeve, inner seal, inner bearing, outer seal, roller bearing and nut, for lift truck models (see Figure 3)

- S50CT (B267)
- H2.0-2.5CT (H50CT) (B274)

19. Install washer, lock plate and wheel adjustment nut for lift truck models

- S30-35FT, S40FTS (F010)
- H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)
- S2.0-3.5FT (S40-70FT, S55FTS (H187)
- H2.0-3.5FT (H40-70FT) (P177)

Install lockwasher, locknut and wheel adjustment nut for lift truck models

- S50CT (B267)
- H2.0-2.5CT (H50CT) (B274)

NOTE: Perform steps Step a through Step f for all lift truck models.

a. To align bearing rollers, tighten wheel adjustment nut to 14 to 18 N•m (124 to 159 lbf in) and rotate hub 2 revolutions in both directions.

b. To seat wheel bearings, tighten wheel adjustment nut to 175 to 215 N•m (129 to 159 lbf ft) for lift truck models

- S2.0-3.5FT (S40-70FT, S55FTS) (H187)
- H2.0-3.5FT (H40-70FT) (P177)

c. To seat wheel bearings, tighten wheel adjustment nut to 120 to 145 N•m (89 to 107 lbf ft) for lift truck models

- S30-35FT, S40FTS (F010)
- H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)
- S50CT (B267)
- H2.0-2.5CT (H50CT) (B274)

d. Back off wheel adjustment nut to zero end play.

e. Preload wheel bearings by tightening wheel adjustment nut to 14 to 18 N•m (124 to 159 lbf in). Rotate hub 3 complete revolutions in both directions.

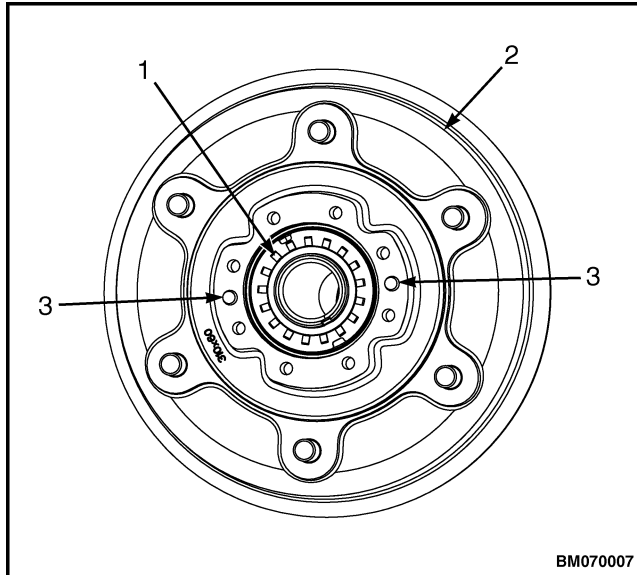
f. Verify wheel adjustment nut torque is 14 to 18 N•m (124 to 159 lbf in) and that torque stabilizes at that specification.

20. Bend lock plate over lock nut. See Figure 14, for lift truck models

- S30-35FT, S40FTS (F010)
- H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)
- S2.0-3.5FT (S40-70FT, S55FTS (H187)
- H2.0-3.5FT (H40-70FT) (P177)

Bend bearing lockwasher over lock nut. See Figure 3 for lift truck models

- S50CT (B267)
- H2.0-2.5CT (H50CT) (B274)



1. LOCK PLATE
2. HUB/BRAKE DRUM ASSEMBLY
3. DOWEL PIN

Figure 14. Lock Plate



CAUTION

If there is too much clearance, the automatic adjusters will not operate. If the clearance is too small, the automatic adjuster cannot turn the adjuster wheel to increase the clearance, and the adjuster wheel will not turn until the brake shoes wear. If the adjuster wheel does not move for a long operating period, the adjuster link can wear a spot on the adjuster wheel so that it will not turn correctly.

NOTE: If brake shoes were not replaced, loosen adjuster wheel approximately 20 teeth.

21. Adjust clearance of brake shoes. Put a brake adjustment tool or a screwdriver through slot in back plate. Use tool to rotate adjuster wheel. Actuator for adjuster wheel will only permit rotation

in one direction. Turn adjuster wheel until brake shoes have expanded against brake drum and hub will not turn. Use a small screwdriver to lift actuator away from adjuster wheel and turn adjuster wheel approximately 20 teeth in the opposite direction. Brakes will adjust to correct clearance when they are applied while lift truck is traveling in reverse direction.

22. Put liquid sealant, Hyster Part Number 264159, on flange of axle shaft. Install axle shaft and capscrews. Tighten capscrews in cross pattern to a torque specified below for your lift truck.

See Figure 15 for lift truck models

- S30-35FT, S40FTS (F010)
- H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)
- S2.0-3.5FT (S40-70FT, S55FTS (H187)
- S50CT (B267)

See Figure 16 for lift truck models

- H2.0-3.5FT (H40-70FT) (P177)
 - H2.0-2.5CT (H50CT) (B274)
- a. Tighten between 90 to 99 N•m (66 to 73 lbf ft) for lift truck models
 - S2.0-3.5FT (S40-70FT, S55FTS (H187)
 - b. Tighten between 90 to 108 N•m (66 to 80 lbf ft) for lift truck models
 - H2.0-3.5FT (H40-70FT) (P177)
 - c. Tighten between 52 to 62 N•m (39 to 46 lbf ft) for lift truck models
 - S30-35FT, S40FTS (F010)
 - H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)
 - S50CT (B267)
 - H2.0-2.5CT (H50CT) (B274)

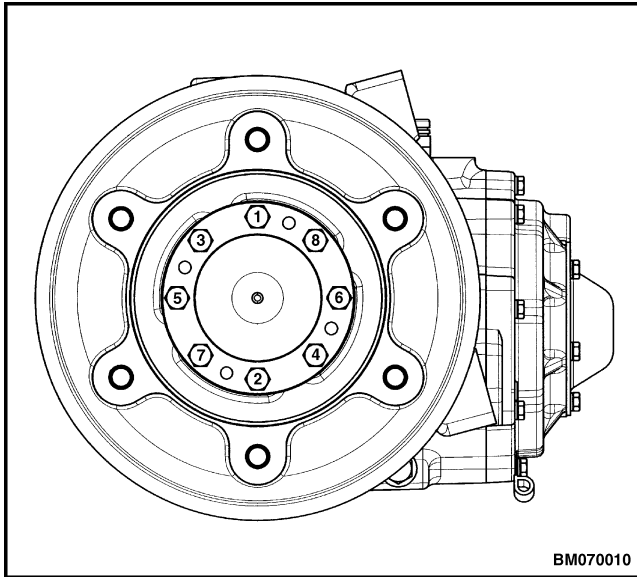


Figure 15. Axle Shaft Tightening Sequence, S30-35FT, S40FTS (F010), H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001), S2.0-3.5FT (S40-70FT, S55FTS (H187), and S50CT (B267)

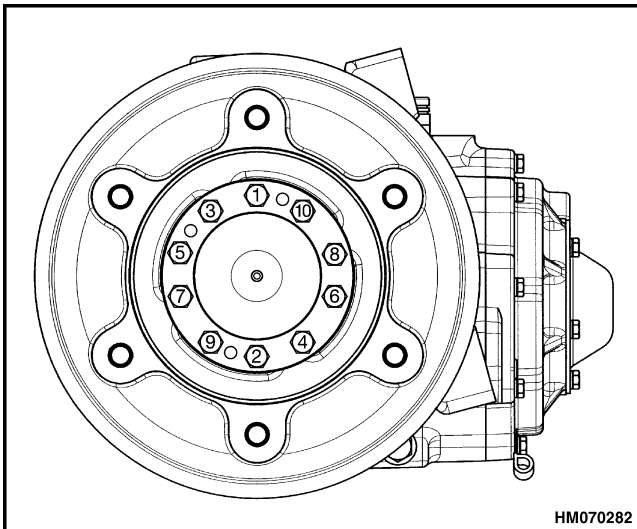


Figure 16. Axle Shaft Tightening Sequence, H2.0-3.5FT (H40-70FT) (P177) and H2.0-2.5CT (H50CT) (B274)

ADJUST

1. Remove air from brake hydraulic system. See Brake System Air Removal.
2. Install wheel on hub. Tighten wheel nuts to torque specified below for your lift truck.

- a. Tighten between 340 to 380 N•m (251 to 280 lbf ft) for lift truck models
 - S2.0-3.5FT (S40-70FT, S55FTS (H187)
- b. Tighten between 450 to 500 N•m (332 to 369 lbf ft) for lift truck models
 - H2.0-3.5FT (H40-70FT) (P177)
- c. Tighten between 155 to 175 N•m (115 to 130 lbf ft) for lift truck models
 - S30-35FT, S40FTS (F010)
 - H1.6-1.8FT, H2.0FTS (H30-35FT, H40FTS) (G001)
 - S50CT (B267)
 - H2.0-2.5CT (H50CT) (B274)
3. Start engine and tilt mast backward to remove blocks. Push on brake pedal. Pedal must not touch floor plate. Move lift truck in **REVERSE** and push on brake pedal to permit adjusting mechanism to operate. Repeat this operation several times.
4. Service brakes must be adjusted before parking brake can be adjusted. See Figure 18 and following paragraphs in this section for correct adjustment of parking brake.

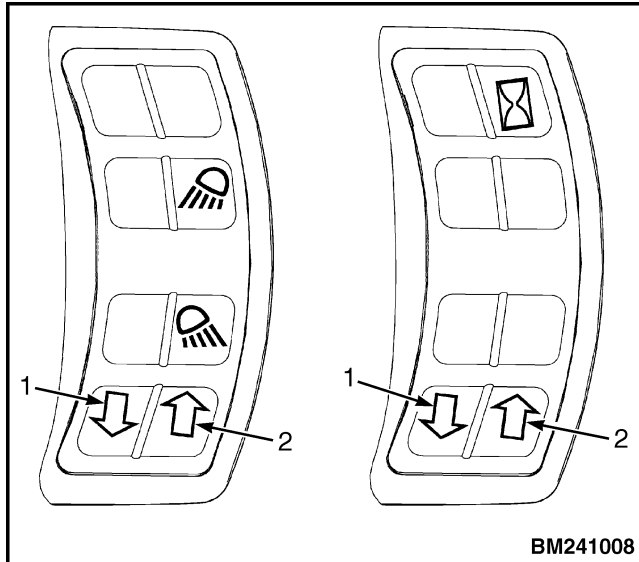
INCHING OVERLAP ADJUSTMENT

NOTE: Perform following procedure for lift truck models

- S50CT (B267)
- H2.0-2.5CT (H50CT) (B274)

NOTE: The amount of overlap is adjustable through a ten-point range with 1 being minimum, 10 the maximum, and 5 the default.

1. Set inching overlap to default using the following procedure.
 - a. Start engine and check inching overlap indicator on display. Perform Step b or Step c to adjust overlap.
 - b. To increase overlap, press Scroll Up button on display switch cluster. See Figure 17.
 - c. To decrease overlap, press Scroll Down button on display switch cluster. See Figure 17.

**Legend for Figure 17**

1. SCROLL DOWN
2. SCROLL UP

Figure 17. Display Switch Cluster

Parking Brake Repair

REMOVE AND DISASSEMBLE

Dry Brake System

If lever assembly for parking brake must be removed from cowl, use the following procedure. See Figure 18

1. Block wheels front and rear side of the wheels to make sure lift truck cannot move. Release parking brake lever.
2. Remove four capscrews that fasten bracket for parking brake to cowl. Remove bracket and brake lever assembly.
3. Loosen jam nuts that fasten threaded ends of brake cables to brake lever assembly.
4. Turn adjuster knob counterclockwise until brake cables are loosened. Disconnect cables from link.
5. Service brake assembly must be removed before parking brake cable can be removed from back plate of service brake. A snap ring holds sheath of parking brake cable in back plate of service brake. Remove snap ring and remove parking brake cable from back plate.