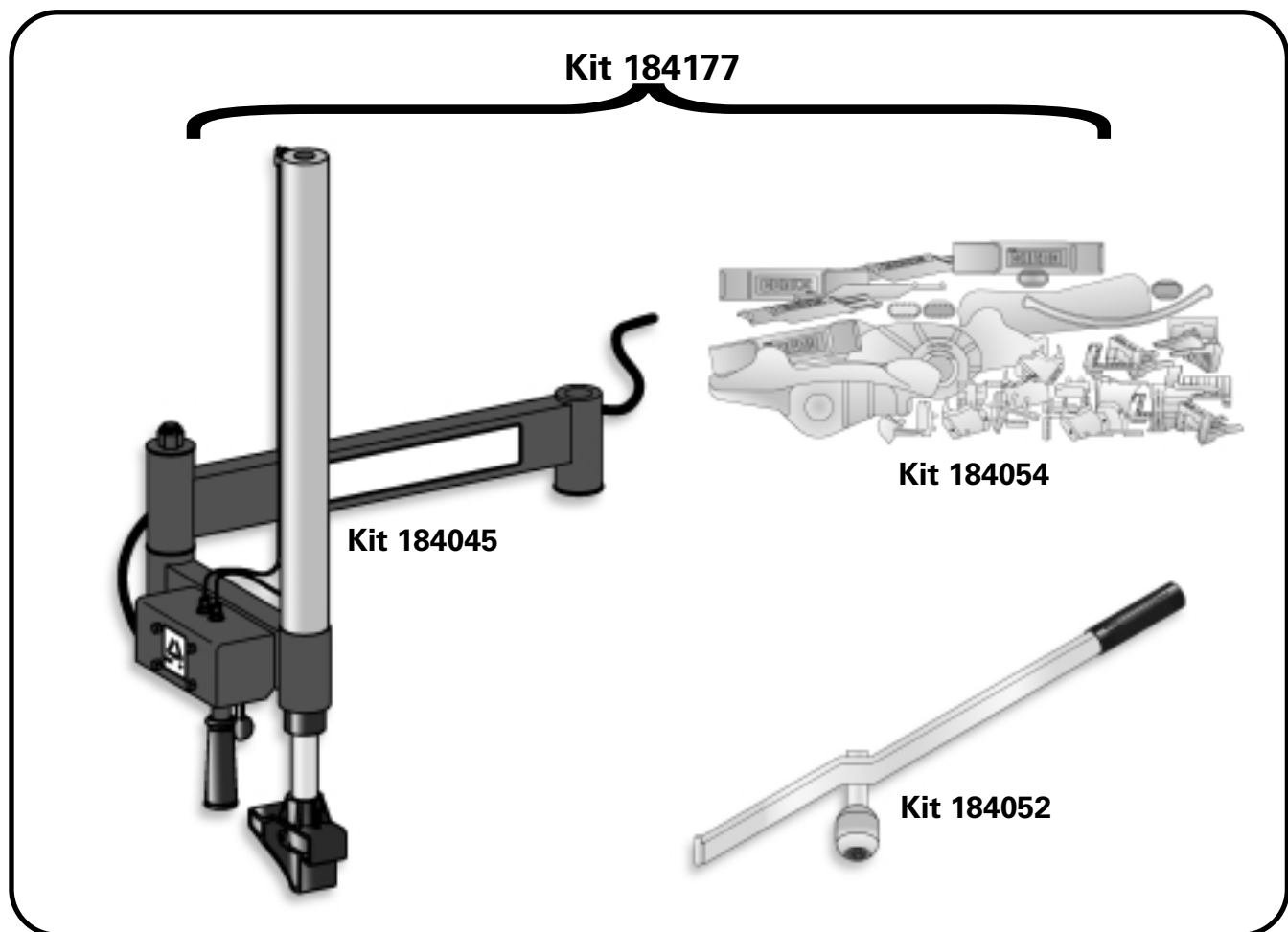


COATS®

Robo-Arm™ and Accessory Kits

For use with COATS Model Series Tire Changers



This is a supplement to your operating manual and covers the use of the Robo-Arm™. If you do not have your original operating manual, please call **COATS at 1-800-688-6359** to request an additional copy.

User Instructions *with Parts Identification*

READ these instructions before placing unit in service KEEP these and other materials delivered with the unit in a binder near the machine for ease of reference by supervisors and operators.

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HENNESSY INDUSTRIES INC. Manufacturer of AMMCO®, COATS® and BADA® Automotive Service Equipment and Tools.

Manual Part No.: 184049

Revision: 10/00 rev. 1

Robo-Arm™

Servicing Custom Wheels with the Robo-Arm™

This accessory is normally used in the servicing of performance and large heavy tires and wheel combinations.



Only tire technicians with experience and training on custom wheels should attempt to service expensive custom alloy or aluminum wheels and high-performance low-profile tires.

Pre-Operation Notes:

- Ensure all weights have been removed.
- Clamp wheel from the outside.
- Use ample lubricant for mount and demounting
- Always review wheel nicks and/or scratches with the owner before servicing.

Performance Tires and Wheels • Demounting

Follow these instructions for performance type tires and wheels, including run-flat tires and their associated wheels, and asymmetrical hump wheels.

- 1.** Remove valve core and completely deflate tire.
- 2.** Pull the bead loosener shoe away from the machine and roll the tire into position against the bumper pads. Position the tire with the valve stem in the 2 o'clock position (in direct line with the bead loosener shoe). Always loosen the bead on the narrow/mounting side of the wheel first (Figures 1 and 2).

AA: Wheels with an asymmetrical hump have a larger "ledge" type hump around the wheel except at the valve hole making them more difficult to mount and demount (Figure 3). Always loosen the beads near the valve stem on both sides of rim first.

AB: Some wheels/tires have a low pressure sensor/transmitter strapped to the wheel (Figure 4). This is especially true on run-flat tire/wheel systems. The sensor is positioned directly opposite from the valve stem. Other low pressure warning systems have the sensor as part of the valve. To avoid damaging the sensor,

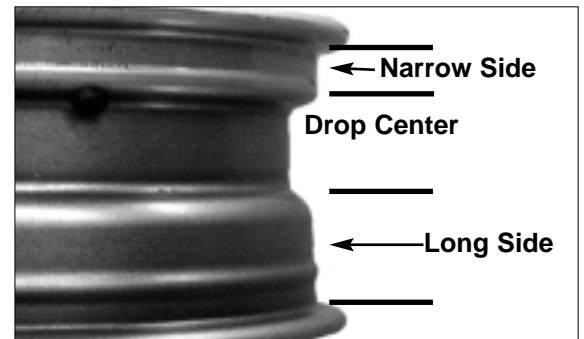


Figure 1 - Determining Mounting Side of Wheel



Figure 2 - Position Tire for Bead Loosening

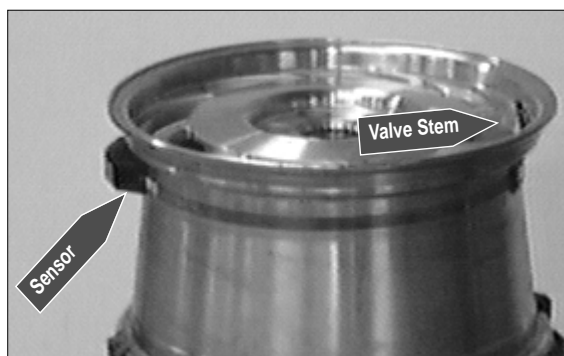


Figure 4 - Wheel with Low Pressure Sensor/Transmitter

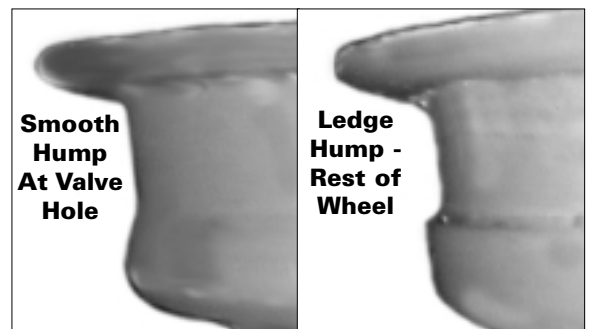


Figure 3 - Asymmetrical Hump Wheel

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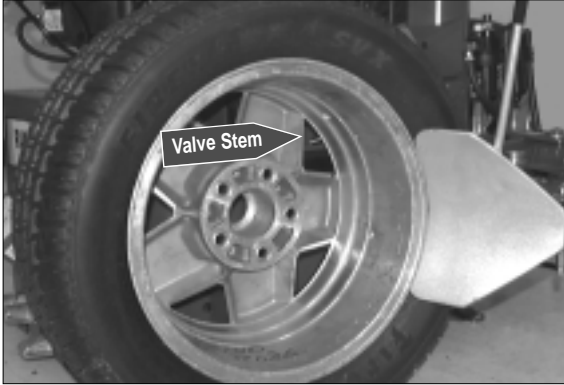


Figure 5 - Loosen Bottom Bead

always loosen the top bead with the valve stem at the 2 o'clock position first, then loosen the bottom bead with the valve stem at the 2 o'clock position, and then continue to loosen the remaining circumference of the beads as necessary. Avoid loosening at 180 deg. (opposite) the valve.

3. Loosen bottom bead, starting with valve stem at 2 o'clock position next to the loosener shoe (Figure 5).

Aluminum and Custom Wheels

Follow instructions provided for standard steel wheels, except:

AC. After loosening and lubricating both beads, rotate the table top until the clamps are in the 12, 3, 6, and 9 o'clock positions (Figure 6).

AD. Clamp wheel from the outside. Position rim edge into clamp at 12 o'clock position. Lower the wheel and depress the clamp control pedal. Slowly move the clamps inward until they securely contact the outside edge of the rim.

Tip: This is usually accomplished by crouching down in front of the tire changer, holding the wheel with the right hand, and operating the clamp control pedal with the left hand. This allows the operator to watch the clamps as they move to ensure proper, damage-free clamping.

4. Clamp the wheel to the table top. Always clamp custom wheels from the outside.

5. Depress the tire sidewall downward with the aid of the helper foot providing clearance for the mount/de-mount head to be positioned (Figure 7). Move swing arm into place. Increase the horizontal distance between the demount head and the wheel an additional 1/16 to 1/8 inch with the adjustment knob.

6. Lubricate upper bead liberally. Use the bead roller tool to help push the tire bead down so bead area is easier to reach for lubrication (Figure 8).

7. Locate the valve stem just before the demount head before proceeding (Figure 9).

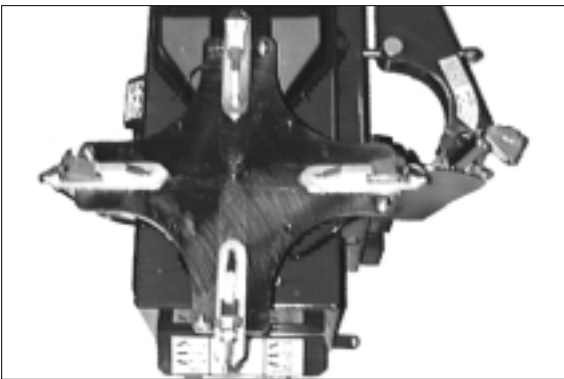


Figure 6 - Rotate Table Top to 12 O'clock



Figure 7 - Helper Foot Depressing Sidewall of Tire



Figure 8 - Lubricate Upper Bead

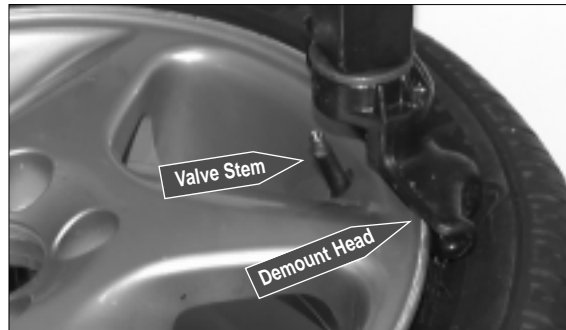


Figure 9 - Position Valve Stem Under Demount Head

Robo-Arm™

8. Place the helper foot opposite the demount head and push the bead into drop center. Insert bead lifting tool between knob on demount tool and tire bead (Figure 10). Use roller tool to provide clearance.

9. Rotate lifting tool down over wheel to lift bead up and over the knob and at the same time remove helper foot (Figure 11).

10. Hold lifting tool in place, depress the table top rotation pedal momentarily to jog the wheel a short distance. Check the wheel and tire to verify that operation is not causing damage. The lifting tool can usually be removed after jogging the wheel a short distance (Figure 12). Continue to jog the wheel to allow the tire sidewall to flex as it crosses the rim edge. Continue short rotations until top bead is completely demounted.

11. Demount lower bead. In most cases when demounting performance tires, the lower bead will be less difficult. Pay close attention to sensor/transmitter location, and position it just before the demount tool when starting the lower bead demount procedure (Figure 13).

12. Use the upper side of the helper foot to hold the bead in drop center while lifting the lower bead over the demount tool (Figure 14). Hold the lifting tool in place and remove the helper foot. Depress the table top rotation pedal momentarily to jog the wheel short distances to complete the demounting process.



Figure 10 - Insert Bead Lifting Tool



Figure 11 - Rotate Lifting Tool Down for Demount



Figure 12 - Holding Lifting Tool in Place and Rotate Wheel



Figure 14 - Helper Holding the Lower Bead in Drop Center



Figure 13 - Sensor/Transmitter Location

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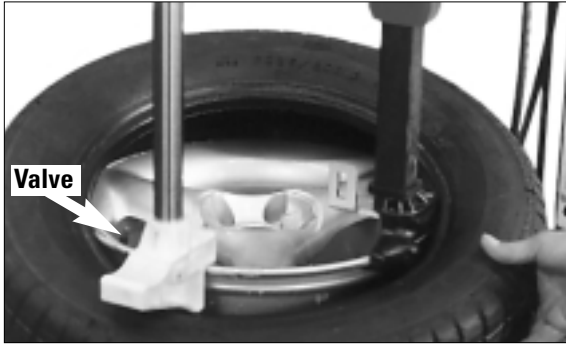


Figure 15 - Mount Upper Bead, Use Helper

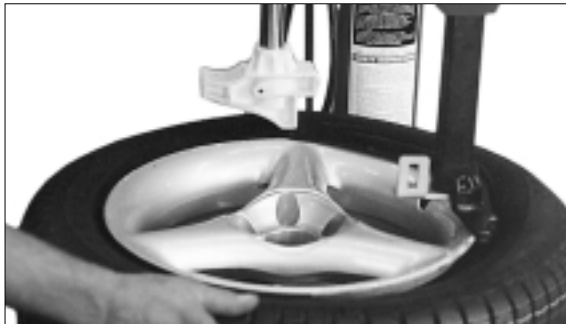


Figure 16 - Helper Foot to Flip Bead Over Rim Flange

Performance Tires and Wheels - Mounting

1. Lubricate both tire beads liberally. Performance tires will require more lubrication than standard passenger car tires.

2. Mount the lower bead. In most cases, the lower bead will mount easily.

AE: Mounting the top bead can be very difficult when mounting new tires on performance and custom wheels. Proceed slowly and cautiously.

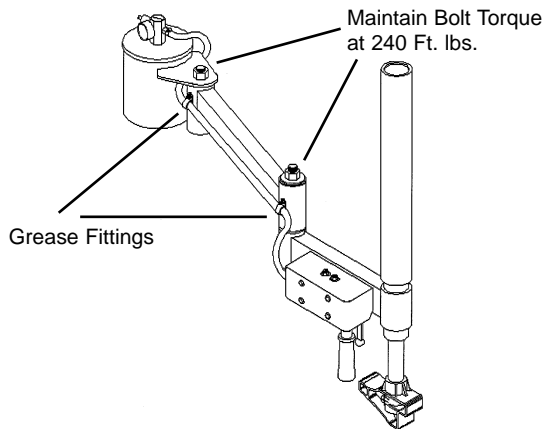
3. Position the valve stem 90 degrees clockwise in front of the mount/demount tool for top bead mounting. Lift the bead over the rear of the mounting head. Use the helper tool to hold the bead in the drop center (Figure 15). Rotate the wheel in short steps and apply extra lubricant to mount upper bead.

4. On extremely tight tire and wheel combinations, it may be necessary to use the bottom of the helper foot to flip the tire bead over the rim flange (Figure 16)

Robo-Arm™ Maintenance

A. Grease the Robo-Arm™ to maintain smooth rotation. Grease fittings have been provided at the pivot joints.

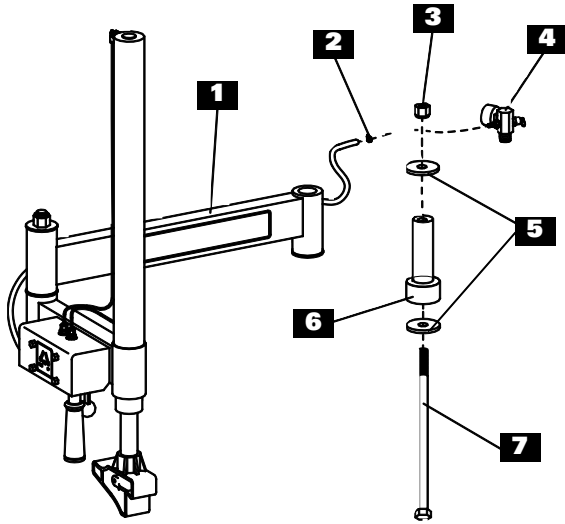
B. Check bolt torque periodically at pivot joints. Proper Torque is 240 ft. lbs.



Robo-Arm™

Parts Identification

Kit 184177 includes the following Robo-Arm™ and Accessory Kits



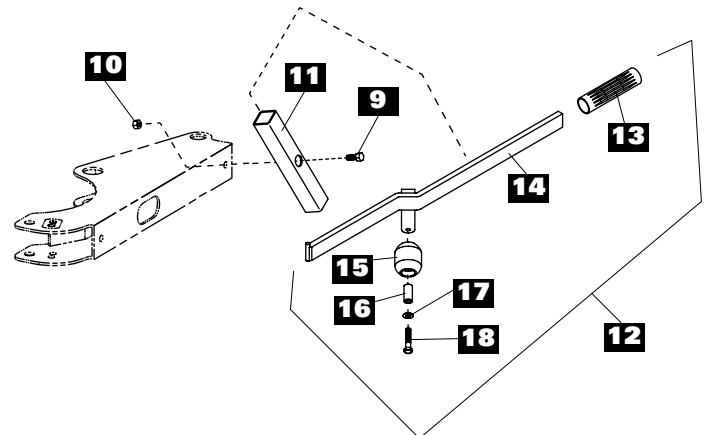
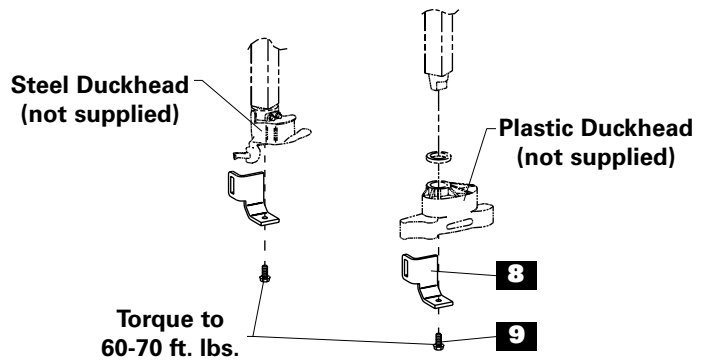
Robo-Arm™ Kit 184045

Item	Part No.	Qty.	Description
1	184058	1	Robo-Arm™ Assembly
2	101428	1	Hose Clamp, 1/4" ID Hose
3	182016	1	Nut, Hex Nylock, 3/4-10
4	184059	1	Manifold/Gauge/Valve Assembly
5	100994	2	Washer, .812 ID x 2 3/4 OD x 3/8"
6	184208	1	Pivot Pin\Spacer
7	183635	1	Hex HD Cap Screw, 3/4-10 x 14"

Bead Roller Tool Kit 184052

Item	Part No.	Qty.	Description
8	183665	1	Tool Bracket, Receiver
9	106302	2	Hex HD Cap Screw 3/8-16 x 7/8"
10	106303	1	Hex Nut, 3/8-16
11	183666	1	Storage Tube
12	183658	1	Bead Roller Tool Assembly
13	120332	1	Handle Grip
14	183659	1	Handle
15	183664	1	Roller
16	183663	1	Spacer
17	112310	1	3/8" Flat Washer
18	006101	1	Hex HD Cap Screw 3/8-16 x 2"

Bead Roller Tool



Nylon Duckhead, and Rim Clamp Bootie Kit 184054

Item	Part No.	Qty.	Description
19	183605	1	Lift Tool Bootie, Pkg. of 10
20	183606	1	B.L. Bootie, Pkg. of 2
21	183846	1	Nylon Duckhead Kit
22	182960	1	Nylon Duckhead
23	182963	1	Steel Duckhead Bootie, Pkg. of 12
24	183604	1	Rim Clamp Bootie, Pkg. of 10

