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Plastic Clad Wheels

HUNTER Engineering Company

CONTENTS

1. GETTING STARTED

1.1 Special Procedure Information

Plastic clad wheels require special procedures when changing & balancing tires. This document includes the procedures for servicing and balancing of these wheels on Hunter equipment.

Damage caused by improper procedures

1.2 Identifying the Wheel

Plastic clad wheels are easily identified when closely inspected. The wheel itself is aluminum and only the outside face is plastic. The plastic cladding gives the wheel a high polish chrome look. There are 4 types of clad wheels:

Type 1

- No cladding at rim edge
- No cladding at center bore
- No special considerations for tire changing & balancing

Type 2

- Cladding at rim edge
- No cladding at center bore
- Special considerations for tire changing
- No special considerations for balancing

Type 3

- No cladding at rim edge
- Cladding present at center bore
- Special considerations for tire changing (using center clamp machines)
- Special considerations for balancing

Type 4

- Cladding at rim edge
- Cladding at center bore
- Special considerations for tire changing
- Special considerations for balancing

2. TIRE CHANGING

2.1 TCR1

The Hunter Revolution Tire Changer is the best choice for servicing plastic clad wheels. It is equipped with a leverless tool head, bead breaking is done with rollers, and the automatic operation reduces the chance of these rollers contacting the cladding.

Flange Plate

A flange plate MUST be used to clamp clad wheels using the Hunter Revolution Tire Changer.

Configure Flange Plate

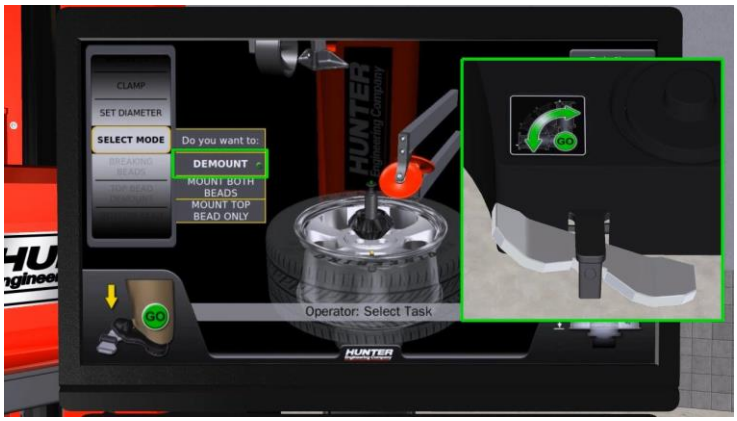
Configure the flange plate to the correct lug pattern.

Clamp Wheel

Install the flange plate and clamp to the wheel using the small cone.

Bead Loosening

Set rim size and TPMS position normally. Press the "GO" pedal to store measurements. Begin demount process by pressing and holding the "GO" pedal. Rollers will loosen beads automatically.



Tire Dismounting

Follow the on-screen instructions to demount both beads by holding the "GO" pedal.

Tire Mounting

Follow the on-screen instructions to mount lower bead by holding the "GO" pedal.

Position bead press arms if necessary, follow on-screen instructions to mount upper bead by holding the "GO" pedal.

2.2 Auto34 & TC3900

The Hunter Auto34 & TC3900 are very good tire changers for servicing plastic clad wheels especially when an optional flange plate is used. These machines feature a leverless head and the ability to loosen beads using rollers as opposed to a side shovel.

Wheel Clamping

No special procedures are required for clamping wheels without cladding present at the center bore (types 1 & 2). If cladding is present at the center bore (types 3 & 4), follow one of the procedures listed below.

Flange Plate – Preferred Method

Configure the flange plate to the correct lug configuration, install the flange plate and tighten the clamp normally.

Without Flange Plate

Extreme care must be taken when clamping a plastic clad wheel on an Auto34 or TC3900 without a flange plate. The wheel must be perfectly centered on the tire changer. Check the plastic protector cone on the quick clamp, ensure it is mounted properly and perfectly centered.

Place quick clamp in center post and **lightly** hand tighten. Take care to check that the wheel is perfectly centered before tightening **lightly** by hand.

> ⚠ **CAUTION:** Do not over-tighten. The plastic cladding may crack when servicing.

Bead Loosening

Loosen beads with rollers as normal. There are no special procedures except to ensure the upper bead roller does not contact the plastic cladding.

Tire Dismounting

NOTE:	The following procedure applies to plastic clad wheels in which the plastic extends all the way to the edge of the rim. If there is no cladding at the rim edge, normal procedures can be followed.

Place the mount/demount head at the rim edge, taking care not to contact the clad surface, proceed normally to demount top bead.

Demount the lower bead as usual using the lower roller.

Tire Mounting

Place the mount/demount head at the rim edge taking care not to contact the clad surface. Mount the upper and lower beads normally.

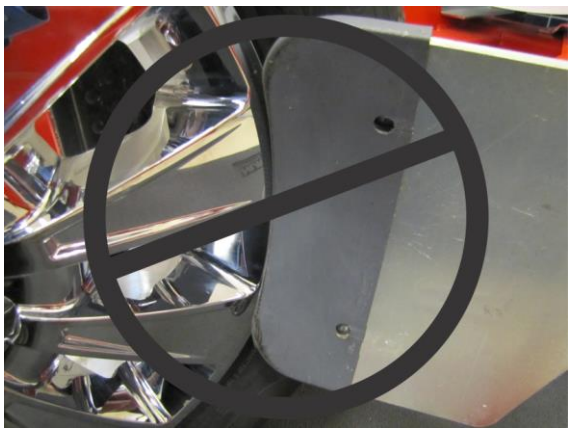
2.3 TCX Series

The Hunter TCX500 and TCX50 Series are good tire changers for mounting and demounting tires on plastic clad wheels. The table clamping system and the rigid tool head help minimize damage to the plastic cladding. Extreme caution must be used when loosening the bead with a side shovel.

Bead Loosening

> ⚠ **CAUTION:** Extreme care must be used when loosening the bead with the side shovel.

Breaking Inner Bead



Breaking Outer Bead

Position the wheel and side shovel carefully as it can potentially damage the cladding when breaking the inner and outer beads.

Wheel Clamping

Place the clamping pedal in the stopped position by partially stepping down on the pedal with the clamps expanding or in the fully expanded position.

From this stopped position, use additional partial steps on the clamping pedal to incrementally retract the clamps. Set the clamps to the correct rim size on the turntable.

Place the wheel onto the turntable.

Continue to incrementally retract the clamps until all four clamps contact the rim.

Step down once only on the clamping pedal (second pedal from the left) to fully retract the clamps to the rim.

NOTE:	Always verify that all four clamps are on the rim before applying pressure to prevent possible failure.

Verify the wheel is perfectly centered on the tire changer. Re-clamp if necessary.

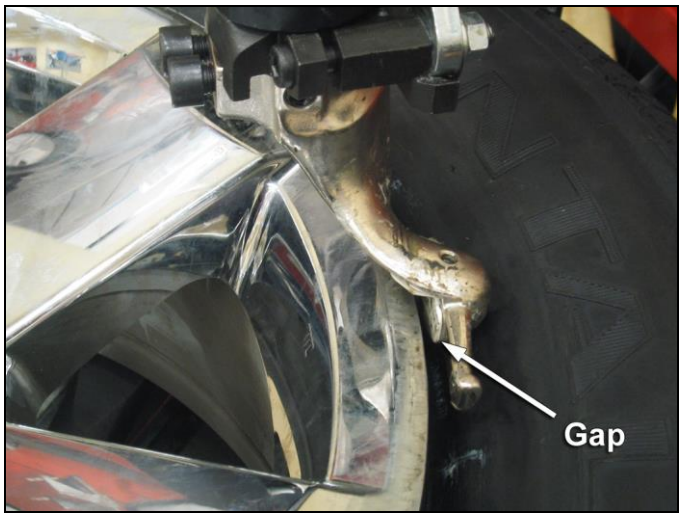
Tire Dismounting (Standard Head)

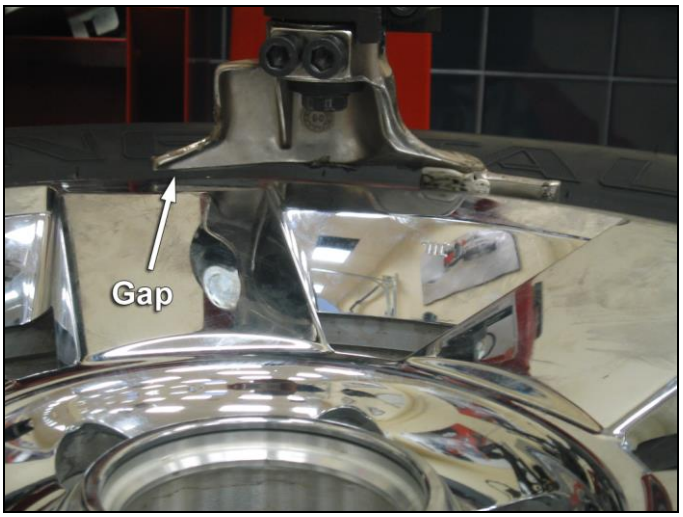
NOTE:	The following procedures apply to plastic clad wheels in which the plastic extends all the way to the edge of the rim. If there is no cladding at the rim edge, normal procedures can be followed.

Install the standard metal mount/demount head if the optional polymer head is installed.

Dismount the tire as normal.

⚠ **CAUTION:**	Ensure a gap is maintained between the mount/demount head and the rims' plastic cladding.





Tire Dismounting (Leverless Head)

Bring the tool head onto the edge of the rim, locking the head will automatically index it back to create a slight gap between the wheel as shown.

Dismount the tire normally.

> **CAUTION:** Ensure a gap is maintained between the mount/demount head and the rims' plastic cladding.

Tire Mounting

Mount the tire normally. On machines equipped with leverless heads, make sure to position the top bead properly on the tool head as shown.

> **CAUTION:** Ensure a gap is maintained between the mount/demount head and the rims' plastic cladding.

2.4 TC3700/TC3300

The TC3700 is a good tire changer to use for servicing plastic clad wheels. It is equipped with a locking mechanism which reduces the possibility of damage by holding the tool head off the clad surface. The TC3300 is similar in design and function, but is not equipped with a locking head.

Wheel Clamping

No special procedures are required for clamping wheels without cladding present at the center bore (types 1 & 2). If cladding is present at the center bore (types 3 & 4), follow one of the procedures listed below.

Flange Plate – Preferred Method

Configure the flange plate to the correct lug configuration, install the flange plate and tighten the clamp normally.

Without Flange Plate

Extreme care must be taken when clamping a plastic clad wheel on a TC3700 or TC3300 without a flange plate. The wheel must be perfectly centered on the tire changer. Check the plastic protector cone on the quick clamp, ensure it is mounted properly and perfectly centered.

Place quick clamp in center post and **lightly** hand tighten. Take care to check that the wheel is perfectly centered before tightening **lightly** by hand.

> ⚠ **CAUTION:** Do not over-tighten. The plastic cladding may crack when servicing.

Bead Loosening

TC3700

It is recommended to break the beads using the rollers. Use caution when lowering the upper roller so as not to contact the cladding.

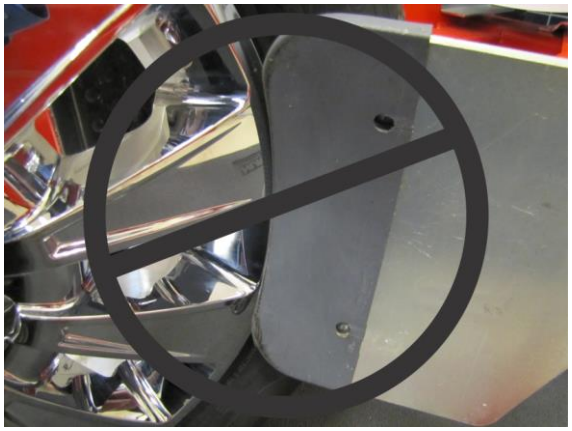
Using the side shovel, if equipped, is not recommended but can be used to break the beads. Follow the same cautions listed below for the TC3300

TC3300

Position the tire and shovel carefully, the cladding may crack if contact is made.

> ⚠ **CAUTION:** Extreme care must be used when loosening the bead with the side shovel.

Breaking Inner Bead



Breaking Outer Bead

Position the wheel and side shovel carefully as it can potentially damage the cladding when breaking the inner and outer beads.

Tire Dismounting

NOTE:	The following procedures apply to plastic clad wheels in which the plastic extends all the way to the edge of the rim. If there is no cladding at the rim edge, normal procedures can be followed.

TC3700

Lower the tool head, but leave a slight gap between the rim and the head. Releasing the lock button will index the head back slightly to increase this gap.

Proceed to dismount the tire normally. Using the plastic sleeve on the bead lever is recommended to help prevent damage to the plastic cladding.

TC3300

Adjust the tool arm to the Plus 1 lean back position.

This should create a small gap between the rim edge and the tool head.

CORRECT

INCORRECT

Proceed normally to dismount the tire, using the plastic sleeve on the bead lever is recommended to help prevent damage to the plastic cladding.

Tire Mounting

TC3700 & TC3300

Mount the tire normally, ensure a gap is maintained between the rim edge and the tool head.

CAUTION: Ensure a gap is maintained between the mount/demount head and the rims' plastic cladding.

3. BALANCING

3.1 Wheel Mounting

When mounting wheels with cladding at the center bore, a flange plate and low taper collet must be used.

Hunter Flange Plate and Collets

Place the Hunter Direct-Fit Dual-Taper collet 160 on the balancer with the purple label facing the balancer hub.

Assemble the Hunter Flange Plate with three of the longer angled-tip fingers. Adjust flange plate to fit into wheel lug holes.

Mount the wheel on the balancer as normal when using a flange plate and perform balance procedure.

Haweka Flange Plate and Collets

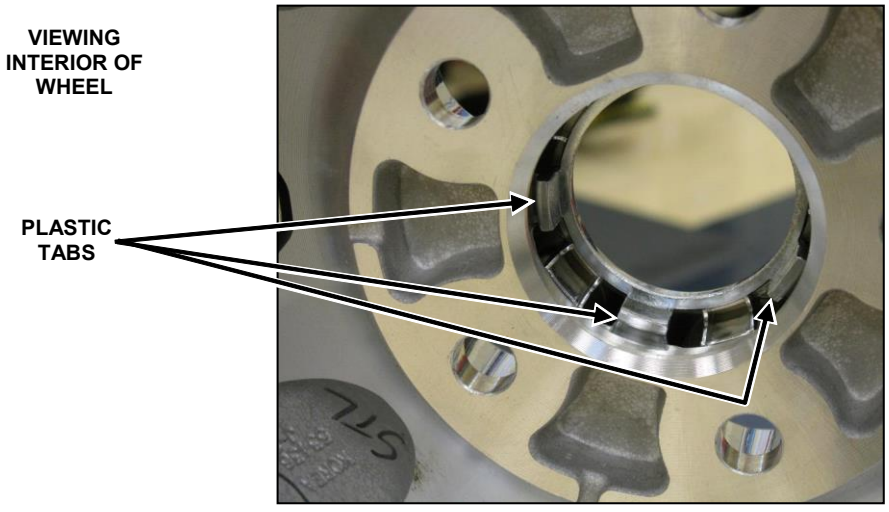
Place the Hunter Direct-Fit Dual-Taper collet 160 on the balancer with the purple label facing the balancer hub.

Assemble the Haweka No. 4 plate, 231-901-409, using three 271-994-121 fingers in the #7 position.

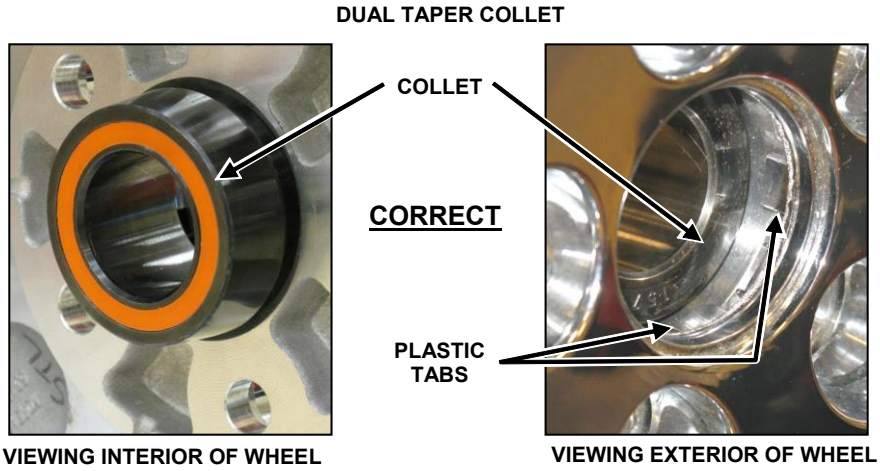
Mount the wheel on the balancer as normal when using a flange plate and perform balance procedure.

Collets vs. Cones

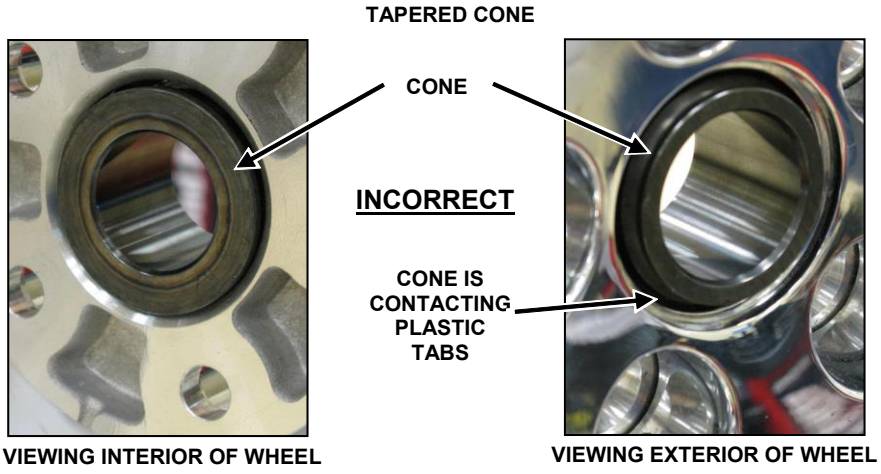
Some plastic clad wheels require specific piloting on balancers to properly center the wheel and prevent damage to the plastic clad surface. Wheels that have plastic tabs extending into the wheel pilot bore are examples of such wheels.



Use a dual taper collet to properly seat the pilot bore without contacting the plastic tabs.



Traditional tapered cones will contact the plastic tabs. This will prevent proper pilot bore seating and will damage the plastic tabs.



3.2 Weight Placement

Weight placement on plastic clad wheels is similar to other custom wheels. In general, clip weight should not be used on the outside lip of the wheel. The best option for weight placement is to use tape weights on the inside and outside planes, or use a clip weight on the inside plane and tape weight on the outside plane.