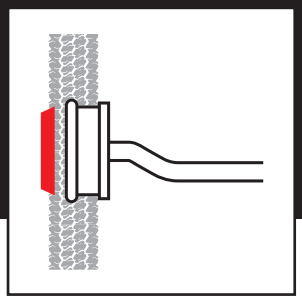
CENTRAMATIC

BALANCERS

Centramatic Balancers mount:

- Between the wheel and drum / hub on **INBOARD STEER** applications
- Between the wheels on **DUAL REAR** applications
- Outside of wheels on **OUTBOARD** applications



INSTALLATION INSTRUCTIONS for OUTBOARD

WARNING

Use of gloves is recommended. **Centramatic Balancers** are manufactured using thin steel, so holes and edges may be sharp and could cause injury.

PRE-BALANCING

While pre-balancing is not required, it may be recommended by your dealer. A good computer balance can indicate a mis-mounted tyre, a defective tyre, bent wheels or other 'out-of-round' conditions. This leaves the full potential of the **Centramatic Balancer** to balance the drum, hub and quickly respond to changing conditions throughout the life of the tyre.

Do not 'strobe' or 'on-vehicle' balance while **Centramatic Balancers** are fitted. **Centramatic Balancers** do not work with this method - on jack stands, there is no deflection and the weights set up erratically under this condition.

VIBRATION

If a vibration develops after installing **Centramatic Balancers**, this normally indicates a loose wheel bearing, or possibly a mechanical problem related to the suspension or undercarriage. **Centramatic Balancers** will not automatically balance the vehicle when such problems arise.

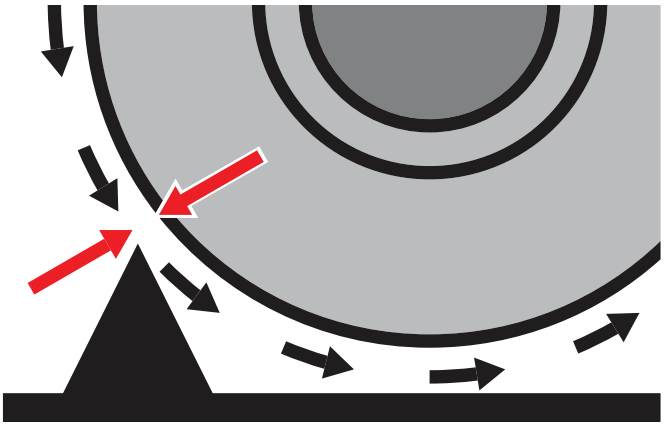
1 Raise the vehicle or axle so that the wheel may be safely removed using proper lifting / jacking techniques as recommended by the vehicle manufacturer.

2 Before removing the wheel, note the wheel / hub position by marking the wheel stud adjacent to valve stem, or similar method.

Now **check for out-of-round** wheel condition by placing a fixed object point on the ground a few mm gap from the tyre tread by turning the wheel slowly and noting if any change in the gap occurs. 2 - 3mm is acceptable; over 3mm is unacceptable. If unacceptable, one or more of 4 problems may exist. Check and correct as necessary:

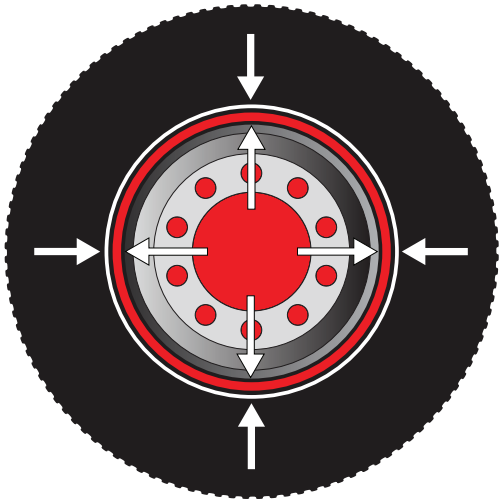
A Rim / hub pilot tolerance may be excessive. Remount wheel using centreing sleeves.

B Rim not concentric. Move fixed object point near rim and turn wheel noting if gap changes. Replace rim if necessary.



C **Tyre fitting not central on rim**. Check that tyre guide rib is same distance from rim around the entire circumference of rim. 2mm deviation is acceptable. If unacceptable, refit tyre to rim after turning 180º.

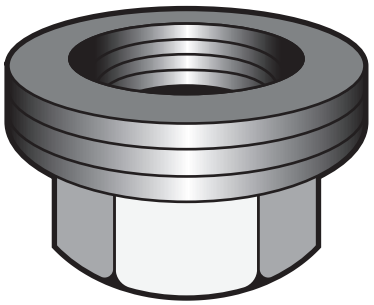
D **Out-of-round tyre**. Use tyre truer machine to correct tyre or replace tyre. NOTE: No amount of balancing can correct out-of-round wheel / tyre assembly. Tyres should be re-mounted / replaced or cut round with **Tyre Truer**.



3 **Remove old wheel weights** unless recently balanced. If balanced on-vehicle, replace wheel in same position as previously marked prior to removal. Remove any balancing material inside tyre.

4 **Remove 5 of the 10 wheel nuts** - removing every second nut - noting if nuts are flush-mount or spigot-type nuts.

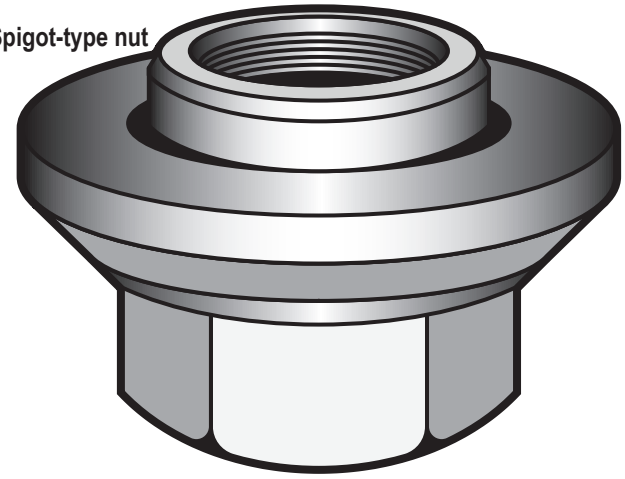
5 **If spigot-type nuts**, ensure that the **Centramatic Balancer** has the correct hole size for spigot outer diameter, or stud diameter if non spigot-type nuts.



Flush mount nut

6 **Place outboard Balancer mounting brackets over the 5 studs without nuts** and ensure brackets are flush with outer flat face of rim. If spigot-type nuts, use 2 nuts to centralise **Balancer** - check **Balancer** doesn't touch any other part of rim, which could result in distortion of **Balancer** when nuts are tightened.

Spigot-type nut



7 Now, **lightly seat all 5 nuts**, ensuring spigot-type nuts are all in position correctly in holes before using manufacturer's torque specifications and tightening sequence.

*Outboard **Centramatic Balancers** are centred by the wheel studs / spigot nuts and, if not fitted centrally, will not work.