

CLARK

Service gram

April 30, 1971

MICHIGAN SG-377
Group Ref. No. 2400

SUBJECT: Wheel Assemblies, Mounting Studs and Nuts
All Models MICHIGAN Tractor Shovels, Dozers & Scrapers

The wheel and tire assemblies on MICHIGAN machines are mounted on the axle wheel hubs by use of threaded studs and in the majority of applications are retained by use of nuts having a spherical surface which seat in mating spherically countersunk holes in the wheel disc. In some applications the wheel assembly is mounted on a pilot diameter on the wheel hub and retained in place by use of studs and flat nuts. In both types of mountings, it is essential that the nuts be kept tight to the applicable torque specifications for the thread size employed. Loose wheel mounting nuts cause the mounting holes in the wheel disc to become elongated. As a result, the mating spherical surfaces on the nut and in the wheel become mismatched causing uneven wear and eventually the wheel studs break off.

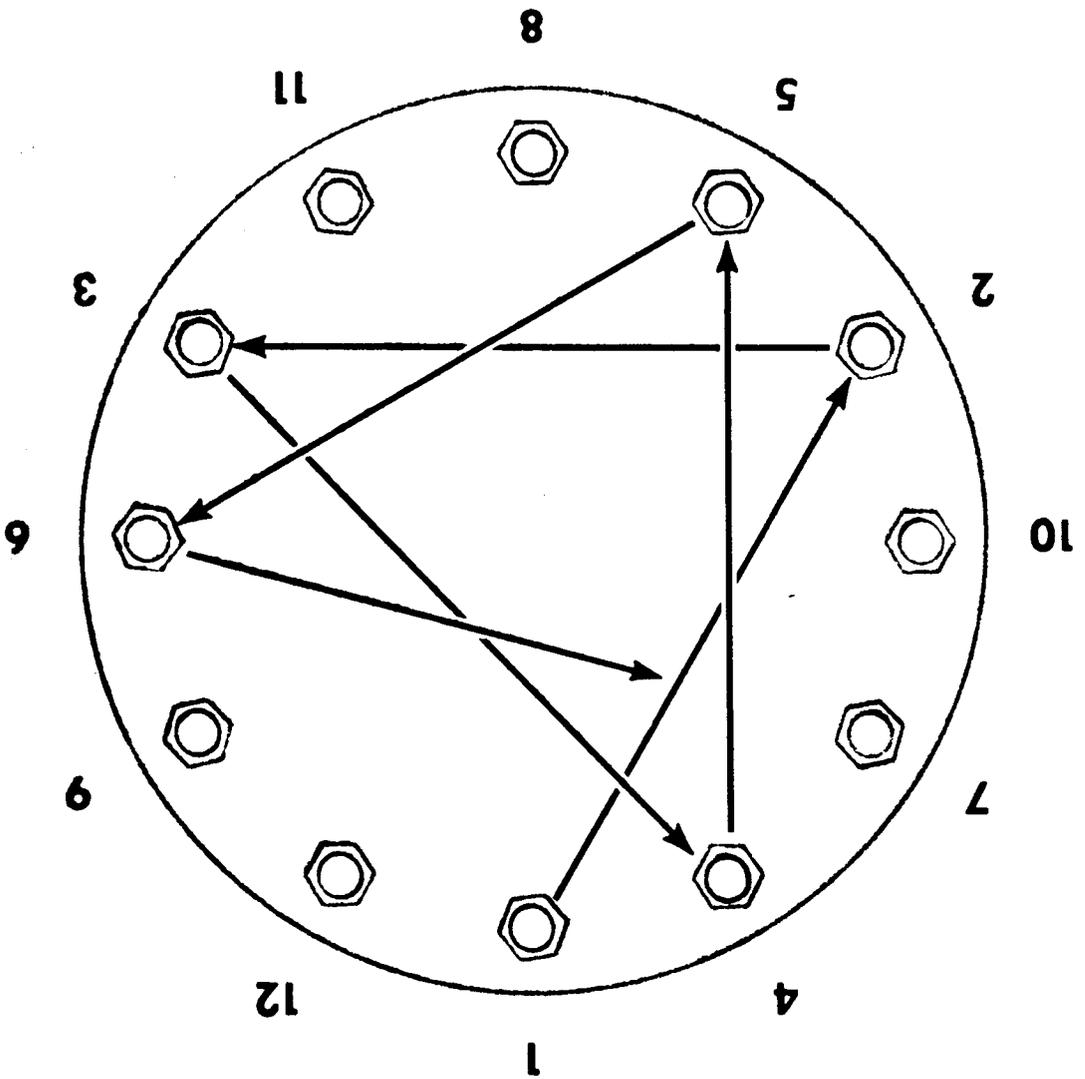
Working motions of the machine tend to loosen the wheel nuts and therefore it is essential that these nuts be checked periodically for tightness. It is recommended that these nuts be checked for tightness prior to placing a machine in service and again after the first eight hours of operation. Such checks should also be performed whenever a wheel and tire assembly has been removed from the machine for any reason and the remounted. Subsequent checks for tightness of wheel nuts should be performed after each fifty (50) hours of operation. When tightening wheel nuts, tighten same evenly in a sequence similar to that shown in Figure 1 herein. DO NOT OVERTIGHTEN. Overtightening will cause excessive stretching of studs which may result in premature failure.

If a wheel stud breaks off or becomes deformed, it should be replaced, as well as the studs on either side of it. If several studs are broken, replace all studs.

Refer to applicable Operators Manual of machine model involved for torque specifications on wheel nuts.

TS-10956

FIGURE NO.1



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May 7, 1971

MICHIGAN SG-381
Group Ref. No. 2400

SUBJECT: Welding or Heating Wheels which are Assembled
with Inflated Tire - Applicable to All Models
of MICHIGAN Tractor Shovels, Dozers & Scrapers

It has been determined, in the interest of safety, that welding or heating a wheel rim assembled to an inflated tire should never be attempted. In any case where welding or heating a wheel with assembled tire is required, the following procedure should be used to prevent damage to tires and danger to personnel.

1. Deflate tire and remove valve core. This will prevent captive air in the tire from expanding and creating pressures in excess of the ability of the tire to withstand.
2. After heating or welding operation has been completed, allow rim to cool before reinstalling valve core.
3. After rim has cooled, install valve core, inflate tire to normal operating pressure, and install valve cap.

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Service gram

August 4, 1971

MICHIGAN SG-396
Group Ref. No. 2400

SUBJECT: Tire Explosions

The tire manufacturers have reported that in the past few years there have been a number of cases of tires exploding violently while on the vehicle. The tires were literally torn apart by the forces of a violent explosion. Fortunately, in each case reported there has been little personal or property damage involved aside from the tire. When a tire explodes in this manner, however, the forces involved are so great that the potential for more serious personal injury and property damage exists.

The cause of these explosions is the existence of inflammable vapors inside the tire casing which form an explosive mixture with the air. Such mixtures, under the right conditions, may be ignited by an electro-static discharge. Very often the electro-static charge is built up inside the tire through friction of the tire in prolonged spinning. This is particularly true of winter time operation where operation on snow and ice exists.

There are several ways the inflammable vapors may enter the tire casing. One, is the use of inflammable base lubricants as a bead lubricant when mounting tires. This can be avoided by use of only a vegetable base soap and water solution for mounting purposes. Second, it is believed that in most cases the inflammable vapors are pumped into the tire along with the air from the air compressor (either stationary or by use of tire inflation kit coupled to compressor on vehicle) when the tire is inflated. This may happen when the tire is originally inflated, or later when inflation is added to a low tire.

There are a number of ways in which the inflammable vapors may get into the compressor and subsequently into the tire casings.

1. USE OF ALCOHOL OR METHANOL IN THE AIR COMPRESSOR (Stationary) TO PREVENT FREEZING OF CONDENSATION. This is a sure way of pumping in explosive vapors, and should not be done. There is no anti-freeze recommended for compressors. Proper and frequent draining of moisture condensate from the compressor tank should eliminate the need for an anti-freeze.
2. USE OF TIRE INFLATION KIT COUPLED TO AIR COMPRESSOR ON VEHICLE EQUIPPED WITH ALCOHOL INJECTOR FOR PREVENTION OF AIRLINE FREEZING. Tire inflation kits should never be used with air compressors of vehicles equipped with alcohol injectors in the air brake system.

3. STORING OF INFLAMMABLE SOLVENTS OR RUBBER CEMENTS IN PROXIMITY OF AIR INTAKE OF THE AIR COMPRESSOR. It is recommended that the compressor be isolated in an area by itself, and kept completely free from other operations such as tire repairing, etc.
4. CLEANING OF THE AIR SCREEN ON THE AIR COMPRESSOR INTAKE WITH INFLAMMABLE SOLVENTS SUCH AS GASOLINE, VARSOL, ETC. When cleaning, be sure the entrapped solvent on the screen is thoroughly blown off with air hose before re-installing.
5. LOCATION OF A BATTERY CHARGER NEAR THE AIR COMPRESSOR INTAKE. When a battery is being recharged, it gives off hydrogen gas, which is highly inflammable. This could be very dangerous if sucked into the compressor intake.

We strongly recommend that a review be made of tire inflation and compressor equipment, making sure that all potential sources of trapping inflammable vapors by the compressor, and subsequently pumped into tires, are eliminated. Particular emphasis should be placed on cessation of use of tire inflation kits on air compressors of machines equipped with alcohol injector in the air brake system. Customers and machine owners of machines so equipped should be advised of the potential danger and given a copy of this bulletin.

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Service gram

23 October 1974

MICHIGAN SG-526
Group Ref. No. 2400

IMPORTANT

SUBJECT: Safety Precaution When Using
Goodyear Unisteel Radial Wire Tires
All Models of MICHIGAN Tractor Shovels, Dozers & Scrapers

The Goodyear Tire and Rubber Company has issued the following policy statement with respect to use of water based ballast in the subject tires:

"DANGER - IMPORTANT - DANGER"

"DANGER OF MOUNTING UNISTEEL RADIAL WIRE
TIRES WITH WATER IN CASING"

"The use of water based ballast in Unisteel wire tires should be eliminated in any application of these tires."

"After a period of time, depending on service conditions, water will permeate through the liner rubber of the tire and attack the steel cables through a corrosive reaction. This may subsequently cause deterioration of the steel cables which will result in premature ply failure of the casing."

"Due to this dangerous reaction, we are urging you to eliminate any condition that may lead to mounting of Unisteel tires with water in the casing. This policy affects only Unisteel tires."

Please advise all customers in your area and all personnel in your distributorship of the importance of this policy statement in the interest of their safety and protection.

25 June 1979

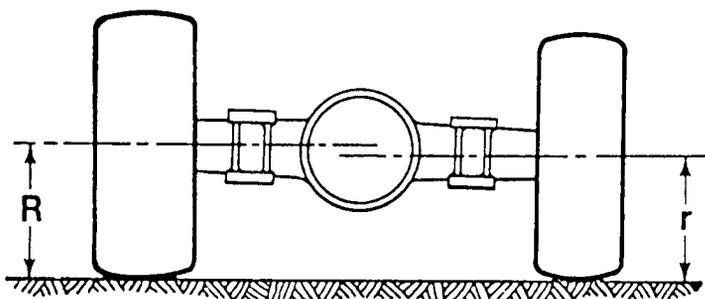
MICHIGAN SG-740A
Group Ref. No. 2400

(This bulletin replaces SG-740, dated 20 December 1978. REASON:
To show metric equivalents).

SUBJECT: Tire Information and Inflation Specifications for all
Models of Tractor Shovels and Dozers

Correct tire matching and tire inflation are necessary for acceptable
tire life and machine performance. The charts in this bulletin give
information on tire matching and tire inflation for Tractor Shovels
and Dozers.

TIRE MATCHING



$R - r =$ ALLOWABLE DIFFERENCE

| TIRE SIZE | MAX. ALLOWABLE DIFFERENCE |
|-----------|---------------------------|
| 23.5-25 | 1¼" *(31,7) |
| 26.5-25 | |
| 29.5-25 | 1½" *(38,1) |
| 29.5-29 | |
| 37.5-33 | 1¾" *(44,5) |
| 37.25-35 | |

MIS-MATCHED TIRES CAN CAUSE:

1. Accelerated Wear of all Four Tires
2. Accelerated Wear of Differential Components and Axles
3. Accelerated Wear of Propeller Shafts

The degree to which these effects become apparent is a matter
of how large a difference exists with mis-matched tires.

*Added metric equivalent

(8F19)

BIAS PLY TIRES FOR DOZERS

The recommended tire pressures for dozers shown below are minimum pressure to assure acceptable tire life and maximum traction. If necessary, increase the tire pressure to eliminate sidewall wrinkling. If maximum tire flotation is required, you can decrease tire pressure if sidewall wrinkling or bead slippage does not occur.

| Model | Tire Size | Ply Rating | Tread | Recommended Tire Pressures Operating | | | | | | Recommended Tire Pressures Rooding | | | | | |
|----------|----------------|------------|-------|--------------------------------------|------|---------------------|------|------|---------------------|------------------------------------|------|---------------------|------|------|---------------------|
| | | | | Front | | | Rear | | | Front | | | Rear | | |
| | | | | PSI | *kPA | *kg/cm ² | PSI | *kPA | *kg/cm ² | PSI | *kPA | *kg/cm ² | PSI | *kPA | *kg/cm ² |
| 280-IIIA | (STD) 29.5-29 | 22 | L-2 | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | (OPT) 29.5-25 | ** | ** | 30 | 207 | 2,1 | 30 | 207 | | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| 280CD | (STD) 29.5-29 | 22 | L-2 | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| 280WC | (STD) 29.5-29 | 22 | L-2 | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| 380-IIIA | (STD) 33,25-35 | 20 | L-2 | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | (OPT) 37.5-33 | ** | ** | 35 | 241 | 2,5 | 35 | 241 | 2,5 | 50 | 345 | 3,5 | 50 | 345 | 3,5 |
| 380CD | (STD) 37.5-33 | 30 | L-2 | 35 | 241 | 2,5 | 35 | 241 | 2,5 | 50 | 345 | 3,5 | 50 | 345 | 3,5 |
| 380WC | (STD) 37.5-33 | 30 | L-2 | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |

*Added metric equivalent

**All models can be equipped in sizes listed with any ply rating available and any tread from L-2 through L-4. Radial ply tires, available for all models, do not apply to this chart.

BIAS PLY TIRES FOR TRACTOR SHOVELS

The recommended tire pressures for Tractor Shovels shown below are for most working conditions. Ground conditions often control the inflation pressure of the tires to allow the machine to work at maximum advantage.

| Model | Tire Size | **Ply Rating | **Tread | Recommended Tire Pressures | | | | | |
|-------|-----------|--------------|---------|----------------------------|------------|-------------------------------|-----|-----------|---------------------|
| | | | | PSI | Front *kPa | Operating *kg/cm ² | PSI | Rear *kPa | *kg/cm ² |
| 35C | 12.00-24 | 8 | G-2 | 45 | 310 | 3,2 | 45 | 310 | 3,2 |
| | 13.00-24 | 8 | G-2 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | 14.00-24 | 8 | G-2 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 15.5-25 | 8 | L-2 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 15.5-25 | 12 | L-2 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 17.5-25 | 12 | L-2 | 30 | 207 | 2,1 | 30 | 207 | 2,1 |
| 45C | 13.00-24 | 8 | G-2 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | 14.00-24 | 8 | G-2 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 15.5-25 | 8 | L-2 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 15.5-25 | 12 | L-2 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 17.5-25 | 12 | L-2 | 30 | 207 | 2,1 | 30 | 207 | 2,1 |
| | 17.5-25 | 12 | L-3 | 30 | 207 | 2,1 | 30 | 207 | 2,1 |
| 55B | 14.00-24 | 12 | G-2 | 45 | 310 | 3,2 | 45 | 310 | 3,2 |
| | 16.00-24 | 12 | G-2,G-3 | 45 | 310 | 3,2 | 45 | 310 | 3,2 |
| | 17.5-25 | 12 | L-2 | 45 | 310 | 3,2 | 45 | 310 | 3,2 |
| | 17.5-25 | 12 | L-3 | 45 | 310 | 3,2 | 45 | 310 | 3,2 |
| | 17.5-25 | 16 | L-2 | 45 | 310 | 3,2 | 45 | 310 | 3,2 |
| | 20.5-25 | 12 | L-3 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| 75B | 20.5-25 | 12 | L-3 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | 20.5-25 | 16 | L-3 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | 20.5-25 | 20 | L-3,L-5 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| 125B | 23.5-25 | 12 | L-3 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 23.5-25 | 16 | L-3 | 45 | 310 | 3,2 | 45 | 310 | 3,2 |
| | 23.5-25 | 16 | L-4 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 23.5-25 | 20 | L-5 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 26.5-25 | 14 | L-2 | 30 | 207 | 2,1 | 30 | 207 | 2,1 |
| 175B | 26.5-25 | 20 | L-2 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | 26.5-25 | 20 | L-3 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | 26.5-25 | 20 | L-4 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | 26.5-25 | 20 | L-5 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | 26.5-25 | 24 | L-3 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | 29.5-25 | 16 | L-3 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |

*Added metric equivalent

**All models can be equipped in sizes shown with any ply rating and tread available.

BIAS PLY TIRES FOR TRACTOR SHOVELS (Cont'd.)

| Model | Tire Size | **Ply Rating | **Tread | Recommended Tire Pressures | | | | | |
|-------|-----------|--------------|---------|----------------------------|------|---------------------|-----|------|---------------------|
| | | | | Front | | Operating | | Rear | |
| | | | | PSI | *kPa | *kg/cm ² | PSI | *kPa | *kg/cm ² |
| 275B | 29.5-29 | 22 | L-2 | 55 | 379 | 3,2 | 45 | 310 | 3,2 |
| | 29.5-29 | 22 | L-3 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |
| | 29.5-29 | 22 | L-4 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |
| | 29.5-29 | 22 | L-5 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |
| | 29.5-29 | 28 | L-2 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |
| | 29.5-29 | 28 | L-3 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |
| | 29.5-29 | 28 | L-4 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |
| | 29.5-29 | 28 | L-5 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |
| | 29.5-29 | 34 | L-2 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |
| | 29.5-29 | 34 | L-3 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |
| | 29.5-29 | 34 | L-4 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |
| 475B | 37.25-35 | 42 | L-5 | 75 | 517 | 5,3 | 75 | 517 | 5,3 |
| | 41.25-39 | 34 | L-5 | 55 | 379 | 3,9 | 55 | 379 | 3,9 |

*Added metric equivalent

**All models can be equipped in sizes shown with any ply rating and tread available.

RADIAL PLY TIRES FOR DOZERS

The recommended tire pressures for Dozers shown below are minimum pressures to assure acceptable tire life and maximum traction. If necessary, increase tire pressures to eliminate sidewall wrinkling. If maximum tire flotation is required, you can reduce tire pressure if sidewall wrinkling or bead slippage does not occur.

| Model | Tire Size | Load/Ply Rating | Tread | Recommended Tire Pressures Operating** | | | | | | Recommended Tire Pressures Rooding*** | | | | | |
|----------|-----------|-----------------|---------|--|------|---------------------|------|------|---------------------|---------------------------------------|------|---------------------|------|------|---------------------|
| | | | | Front | | | Rear | | | Front | | | Rear | | |
| | | | | PSI | *kPA | *kg/cm ² | PSI | *kPA | *kg/cm ² | PSI | *kPA | *kg/cm ² | PSI | *kPA | *kg/cm ² |
| 280-IIIA | 29.5-29 | M/22 or T/34 | UE-8XT | 35 | 241 | 2,5 | 35 | 241 | 2,5 | 50 | 345 | 3,5 | 40 | 276 | 2,8 |
| | 29.5-29 | M/22 or T/34 | UE-16RL | 35 | 241 | 2,5 | 35 | 241 | 2,5 | 50 | 345 | 3,5 | 40 | 276 | 2,8 |
| 280-CD | 29.5-29 | | XKA | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| 280-WC | 29.5-29 | | XKB | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 29.5-29 | | XRA | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 29.5-29 | | XRБ | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 33.25-35 | 5/32 or V-38 | UE-8XT | 35 | 241 | 2,5 | 35 | 241 | 2,5 | 70 | 483 | 4,8 | 50 | 345 | 3,5 |
| | 33.25-35 | 5/32 or V-38 | UE-12RL | 35 | 241 | 2,5 | 35 | 241 | 2,5 | 70 | 483 | 4,8 | 50 | 345 | 3,5 |
| | 33.25-35 | 5/32 or V-38 | UE-16RL | 35 | 241 | 2,5 | 35 | 241 | 2,5 | 70 | 483 | 4,8 | 50 | 345 | 3,5 |
| 380-IIIA | 33.25-35 | 5/32 or V-38 | UE-23XT | 35 | 241 | 2,5 | 35 | 241 | 2,5 | 70 | 483 | 4,8 | 50 | 345 | 3,5 |
| | 33.25-35 | | XKA | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 33.25-35 | | XKB | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 33.25-35 | | XRA | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 33.25-35 | | XRБ | 30 | 207 | 2,1 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| 380-CD | 37.5-33 | | XKB | 60 | 414 | 4,2 | 60 | 414 | 4,2 | 65 | 448 | 4,6 | 65 | 448 | 4,6 |
| 380-WC | 37.5-33 | | XRA | 60 | 414 | 4,2 | 60 | 414 | 4,2 | 65 | 448 | 4,6 | 65 | 448 | 4,6 |
| | 37.5-33 | | XRБ | 60 | 414 | 4,2 | 60 | 414 | 4,2 | 65 | 448 | 4,6 | 65 | 448 | 4,6 |

*Added Metric equivalent

**Maximum 5 mph

***Maximum 20 mph

Bias ply tires, available for all models, do not apply to this chart.

RADIAL PLY TIRES FOR TRACTOR SHOVELS

The chart below indicates the sizes available and the recommended pressures for each size. The recommended tire pressures are maximum pressures in order to assure maximum tire life. For certain applications, traction can be improved by lower pressures.

| Model | Tire Size | Load/Ply Rating | Tread | Recommended Tire Pressures Operating** | | | | | | Recommended Tire Pressures Rooding*** | | | | | |
|-------|-----------|-----------------|---------------|--|------|---------------------|------|------|---------------------|---------------------------------------|------|---------------------|------|------|---------------------|
| | | | | Front | | | Rear | | | Front | | | Rear | | |
| | | | | PSI | *kPA | *kg/cm ² | PSI | *kPA | *kg/cm ² | PSI | *kPA | *kg/cm ² | PSI | *kPA | *kg/cm ² |
| 55B | 17.5-25 | F/12 | UE-16RL | 45 | 310 | 3,2 | 35 | 241 | 2,5 | 40 | 276 | 2,8 | 40 | 276 | 2,8 |
| | 17.5-25 | | XKA, XRA, XRB | 40 | 276 | 2,8 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| 75B | 20.5-25 | H/16 | UE-16RL | 40 | 276 | 2,8 | 35 | 241 | 2,5 | 35 | 241 | 2,5 | 40 | 276 | 2,8 |
| | 20.5-25 | | XKA, XRA, XRB | 35 | 241 | 2,5 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| 125B | 23.5-25 | H/16 | UE-16RL | 40 | 276 | 2,8 | 35 | 241 | 2,5 | 35 | 241 | 2,5 | 45 | 310 | 3,2 |
| | 23.5-25 | | XKA, XRA, XRB | 35 | 241 | 2,5 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| 175B | 26.5-25 | | XKA, XRA, XRB | 35 | 241 | 2,5 | 30 | 207 | 2,1 | 50 | 345 | 3,5 | 45 | 310 | 3,2 |
| | 26.5-25 | | XKB | 35 | 241 | 2,5 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| 275B | 29.5-29 | M/22 or T/34 | UE-8XT | 60 | 414 | 4,2 | 35 | 241 | 2,5 | 50 | 345 | 3,5 | 45 | 310 | 3,2 |
| | 29.5-29 | M/22 or T/34 | UE-16RL | 60 | 414 | 4,2 | 35 | 241 | 2,5 | 50 | 345 | 3,5 | 45 | 310 | 3,2 |
| | 29.5-29 | | XKA | 50 | 345 | 3,5 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 29.5-29 | | XKB | 40 | 276 | 2,8 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| | 29.5-29 | | XRA, XRB | 40 | 276 | 2,8 | 30 | 207 | 2,1 | 35 | 241 | 2,5 | 35 | 241 | 2,5 |
| 475B | 37.25-35 | | XRD2A | 75 | 517 | 5,3 | 65 | 448 | 4,6 | 75 | 517 | 5,3 | 65 | 448 | 4,6 |
| | 37.5-39 | | XRD2A | 70 | 483 | 4,9 | 60 | 414 | 4,2 | 70 | 483 | 4,9 | 60 | 414 | 4,2 |

*Added metric equivalent

**Maximum 5 mph

***Maximum 20 mph

March 1982

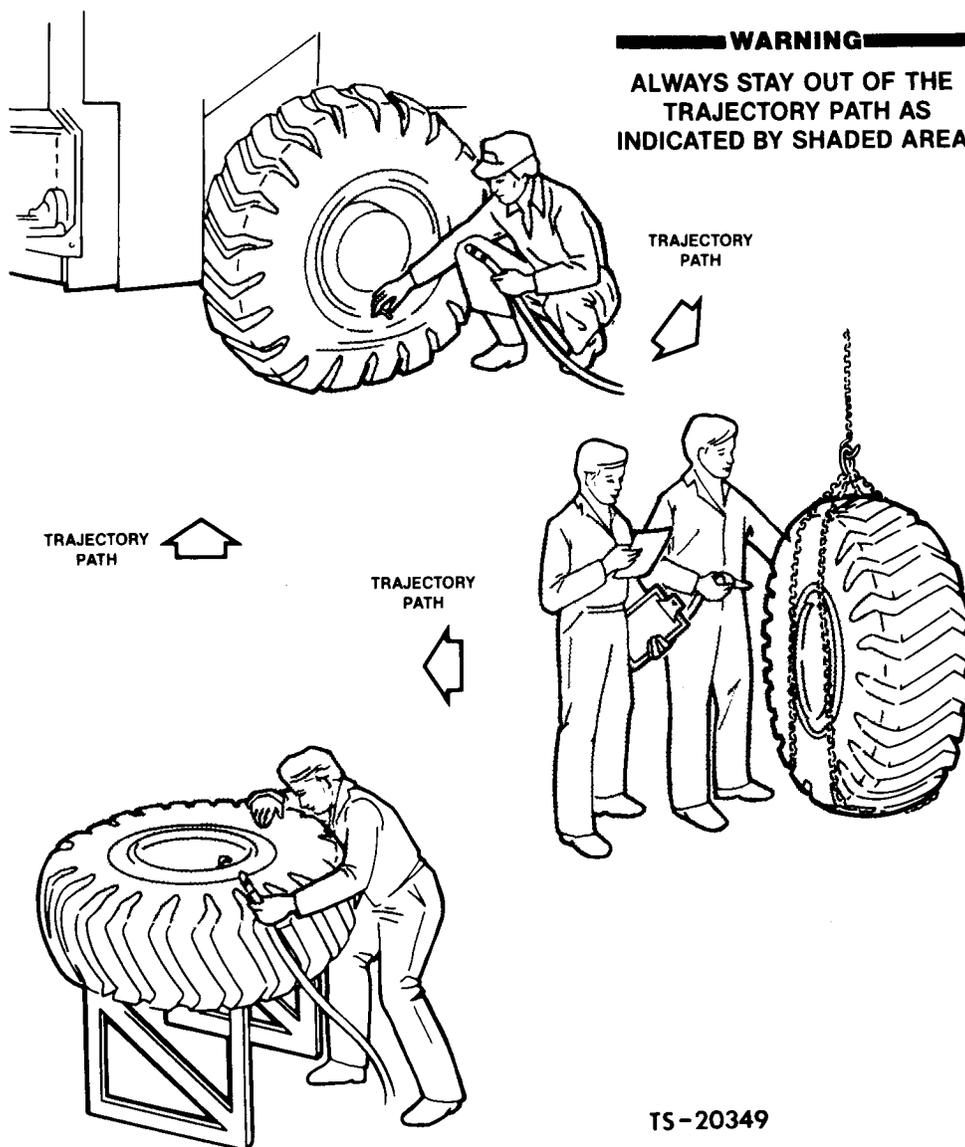
MICHIGAN SG - 760A
Group Ref. No. 2400

(This bulletin replaces MICHIGAN SG-760, dated 25 July, 1979. REASON: Information Revision)

SUBJECT: Multi-Piece Wheels
All Models of Wheel Loaders and Dozers

TRAJECTORY PATHS

WARNING
ALWAYS STAY OUT OF THE
TRAJECTORY PATH AS
INDICATED BY SHADED AREA



TS-20349

According to recent government studies, a large number of accidents caused by violent separation of multi-piece rim wheels have been reported. Most of these accidents have resulted in injuries with a large number of fatalities.



These violent wheel separations can happen at any time. Be careful when moving or working with multi-piece wheels. Keep clear of the trajectory path. The primary danger is putting air in tires which are on multi-piece wheels. Accidents can happen anytime you work with or move multi-piece wheels. If any components are not installed in the correct location, they can separate and cause injury when air is put in the tire. Components with corrosion, wear, and any other damage may separate and cause injuries. Repair or replace any components as necessary.

ALWAYS USE AN INFLATION CAGE, SAFETY CABLES OR SAFETY CHAINS WHEN INFLATING TIRES ON MULTI-PIECE WHEELS.

In order to reduce the amount of exposure to these potential dangers, Clark Equipment Company strongly recommends that all owners operators and service personnel of Clark Wheel Loaders and Dozers equipped with multi-piece rim wheels to carefully keep the correct tire inflation pressure according to the information given in the Operators Manual. Abuse, such as damaged, corroded, wrong or non compatible multi-piece rim wheel parts, exposure to a high amount of heat, or to caustic or otherwise damaging substances should also be avoided whenever possible.

It is also strongly recommended that all multi-piece rim wheel servicing, which includes mounting, demounting, inflation, deflation, installing, removing, maintaining, handling or storage, and inflation and deflation of tires on wheels installed on the machine **only** be done by qualified personnel who are trained to service multi-piece rim wheels.

To reduce the possibility of property damage, personal injury or death caused by violent separation of multi-piece rim wheels, and also to reduce the possibility of a citation for non-compliance, it is very important that all multi-piece rim wheels on Clark Wheel Loaders and Dozers be serviced only in full compliance with the current Occupational Safety and Health Standards Number 1910.177-Servicing Multi-Piece Rim Wheels.

Machine rental customers or other owners, operators, users or service personnel in your territories should have information of these potential hazards. It is recommended that they are given a copy of this bulletin.

Additional copies of this bulletin are available by sending your request to:

North American Locations: Clark Equipment Company
Attention: Product Support Publications
P.O. Box 547
Benton Harbor, MI. 49022

Other Locations: Clark CMG International
P.O. Box 333
Benton Harbor, MI. 49022

CLARK

Service gram

June 1980

MICHIGAN SG-819
Group Ref. No. 2500

SUBJECT: United Tire Distributors

There have been requests for information on United Tire Distributors for the United States and International locations.

A list of present U. S. and Foreign Distributors is attached.

UNITED GUARANTEE

Any product bearing our name, complete serial number and UNITED identification is guaranteed to be free from defects in material and workmanship.

Warranties will be considered on a pro-rata basis of tread remaining or performance received, whichever is to UNITED's advantage and are subject to the following conditions:

- (a) that the product has not become unserviceable as a result of:
 - puncture or similar road hazard injury
 - impact break
 - over- or under-inflation
 - mechanical damage
- (b) that the product has not been used on defective wheels or rims and has not been subjected to any abusive and/or abnormal service conditions
- (c) that the approved warranty will be applied to the purchase of UNITED replacement product only.

U.S. DEALERS

ALABAMA

Independent Tire Co.
1145 Telegraph Road
Mobile, Alabama 36601

Pope Tire Co.
P.O. Box 8
Thomasville, Alabama 36784

ARIZONA

Oconino Tire
1982 Huntington Drive
Flagstaff, Arizona 86001

Redburn Tire Co.
3801 West Clarendon
Phoenix, Arizona 85019

ARKANSAS

Fleet Tire Service
1503 West 3rd Street
Hope, Arkansas 71801

Flint General Tire
1000 Towson Avenue
Fort Smith, Arkansas 72901

CALIFORNIA

Amtex Tire
10170 Croydon Way
Sacramento, California 95827

Big O Tire
Route 1, Box 159
Quincy, California

Big 4 Tire
3630 51st Avenue
Sacramento, California

Burney Tire
Burney, California

Cut Rate Tire
4225 West Capital
West Sacramento, California

CALIFORNIA (Cont'd)

Doherty Tire
601 North Hunter
Stockton, California

Mulkey Kovacovich
801 West Del Norte
Eureka, California

Sierra Tire
3161 South Market Street
Redding, California

COLORADO

J. W. Brewer Tire Co.
5330 West 48th Avenue, Suite 300
Denver, Colorado 80212

Redburn Tire Co.
South Cottonwood Drive
Cortez, Colorado 80321

Superior Tire Service
895 East U.S. 40
Craig, Colorado 81625

Superior Tire Service
3725 Salem
Denver, Colorado 80239

CONNECTICUT

Timberland Machines
259 East Street
Plainsville, Connecticut 06062

FLORIDA

B & C Tire
State Road 108 East
Hilliard, Florida 32046

Buck Morris Tire Company
7200 Northwest 29th Court
Miami, Florida 33147

Tidewater Equipment Co.
1305 North Jefferson
Perry, Florida 32347

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U.S. Dealers
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GEORGIA

Reliable Tractor Co.
Albany Road
Tifton, Georgia 31794

Tidewater Equipment Co.
Hwy 303 South
Brunswick, Georgia 31520

IDAHO

Les Schwab Tire Centre
(12 locations throughout the State)

ILLINOIS

Jake's Tire Co.
1101 North Railroad Street
Marion, Illinois 62959

INDIANA

International Tire Co.
5325 West 84th Street
Indianapolis, Indiana

KENTUCKY

Dunnaway Timber Co.
261 1700 Hwy
Fordsville, Kentucky 42343

Parsley General Tire
2006 North Main Street
London, Kentucky 40741

Time Tire Co.
731 East Broadway
Louisville, Kentucky 40201

LOUISIANA

Auger Timber Co.
South East Street
Farmerville, Louisiana 71241

Area Wholesale Tire
5620 Airline Hwy
Baton Rouge, Louisiana 70821

Area Wholesale Tire
1125 McArthur Drive
Alexandria, Louisiana

MAINE

Ace Tire Co.
Drummond Road
Waterville, Maine

Oliver Stores
Farmington, Maine

Oliver Stores
New Gloucester, Maine

Timberland Machines
188 Perry Road
Bangor, Maine

MARYLAND

Hawkinson Tread Service
Route 219 No. Porth
Oakland, Maryland 21550

Quality Tire Service
East Main Street
Emmitsburg, Maryland

Donald B. Rice Tire Co. Ltd.
909 East Street
Frederick, Maryland

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U.S. Dealers
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MASSACHUSETTS

Hogan Tire
Shrewsbury, Massachusetts

Hogan Tire
Woburn, Massachusetts

Timberland Machines
15 Katrina Road
Chelmsford, Massachusetts

MICHIGAN

Contractor's Industrial Tire Co.
2782 Corbin Avenue
Melvindale, Michigan 48122

Glawe Equipment
12257 U.S. 23 North
Alpina, Michigan 49707

Sears Roebuck & Company
2650 Schust Road
Saginaw, Michigan

MISSISSIPPI

McLemore Supply
P.O. Box 532
Petal, Mississippi 39465

NEW HAMPSHIRE

Timberland Machines
10 North Maine Street
Lancaster, New Hampshire

NEW JERSEY

C & C Tire Co.
21 Route 17
East Rugherford, New Jersey 07073

NEVADA

Mountain States Tire
P.O. Box 888
Tonopah, Nevada

NEW MEXICO

Forest Tire
601 South Main Street
Carlsbad, New Mexico 88220

Redburn Tire Co.
5315 Silver Avenue SE
Albuquerque, New Mexico

NEW YORK

Carswell Truck
685 Glen Street, Box 41
Glenn Falls, New York

Contractor Tire Sales Inc.
Upper North Road, Box 427T
Highland, New York 12528

Terry Haggerty Tire Co.
36 Clinton Avenue
Albany, New York

NORTH CAROLINA

Giant Tire Service
Hwy 16
Denver, North Carolina 28037

Hunt General Tire
428 South McDowell Street
Raleigh, North Carolina 27601

Mid State Tire
208 North Eastern Blvd.
Fayetteville, North Carolina 28302

Potter Oil Co.
P.O. Box 7
Aurora, North Carolina 27806

Rigsbee Tire
Box 8676
Durham, North Carolina

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U.S. Dealers

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NORTH CAROLINA (Cont'd)

Suttons Service Centre
1105 Dickinson Avenue
Greenville, North Carolina

Tidewater Equipment Co.
Hwy 172 West
Washington, North Carolina 27889

OAKLAHOMA

Wilson Tire Service
1838 North 105th East Avenue
Tulsa, Oklahoma 74116

OHIO

Countryman Service Center
U.S. 50 West
Bainbridge, Ohio 45612

Elder Tire
1950 Hendricks Road
Columbus, Ohio 43223

Independence Tire
7810 Old Rockside Road
Indiana, Ohio 44131

OREGON

Les Schwab Tire Centre
Main Warehouse
P.O. Box 667
Prineville, Oregon 97754
(82 locations with stores
in Idaho, Oregon & Washington)

PENNSYLVANIA

Carr's Tire
County Line Road
Chalfonte, Pennsylvania 18914

Frey's Tire Inc.
520 Market Street
Williamsport, Pennsylvania

PENNSYLVANIA (Cont'd)

Rubber Products Company
32nd Smallman Street
Pittsburg, Pennsylvania 15201

Shamokin Tire Co.
912-16 North 6th Street
Shamokin, Pennsylvania 17872

RHODE ISLAND

City Tire
Providence, Rhode Island

SOUTH CAROLINA

International Tire Marketers
P.O. Box 46
North Myrtle Beach, South Carolina 29582

TENNESSEE

Morristown Firestone
231 South Cumberland Street
Morristown, Tennessee 37814

TEXAS

Area Tire Dist. Inc.
413 Saint Elmo Road
Austin, Texas 78745

Crawford Tire Co.
3321 West Freeway
Forth Worth, Texas 76107

Commercial Tire Service
1407 Texas Blvd.
Texarkana, Texas 75501

Eaton Corp.
3409 South Medford Drive
Lufkin, Texas 75901

Tire Products
2801 S.W. Loop 323
Tyler, Texas 75703

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UNITED TIRE
& RUBBER CO. LIMITED

U.S. Dealers
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UTAH

Dinosaur Tire
200 East Main Street
Price, Utah 84501

Jensen Bros. Tire
136-36th Street
Ogden, Utah 84402

Quality Tire of Orem
1010 North State Street
Orem, Utah 84057

VIRGINIA

Bogle Tire
752 Orange Avenue NE
Roanoke, Virginia 24016

WASHINGTON

Andy's Tire
3216 Marineview Drive
Tacoma, Washington 98422

Earrley Tire Co.
P.O. Box 64, 1503 West Wishcan Avenue
Aberdeen, Washington

Mountain Manufacturing
7010-196th Avenue SW
Lynwood, Washington

Hal Ritchie Tire
25101 Pacific Hwy. South
Kent, Washington

Sam's Tire
3810 Airport Way South
Seattle, Washington

Les Schwab Tire Centre
1408 Main Street, Box 176
Lewiston, Washington

Shaub Ellison
1902 Pacific Avenue
Tacoma, Washington

Shaub Ellison
2207 Everett Avenue
Everett, Washington

WASHINGTON (Cont'd)

Tire Sales & Service
2701 Walnut Street
Everett, Washington

WEST VIRGINIA

Cascade Supply
Route 7 East
Cascade, West Virginia 26526

Ferguson Tire Service
1139 Main Street
Weirton, West Virginia 27062

WYOMING

Superior Tire Service
P.O. Box 1160
Douglas, Wyoming 86233

The Tire Den
202 Industrial Park
Rock Springs, Wyoming 82901

U.S. BRANCHES

ALABAMA

2921 3rd Avenue North
Birmingham, Alabama 35203
205/252-9926

Contact: Tom Hooper

COLORADO

6750 East 46th Avenue
Complex C
Denver, Colorado 80216
303/321-6181

Contact: Erv Brush

NEW HAMPSHIRE

P.O. Box 4922
7096 S. Willow Street
Manchester, New Hampshire 31081
603/668-7100

Contact: Bob Alfeiri

OREGON

13730 N.E. Whitaker Way
Portland, Oregon 97230
503/257-0505

Contact: Norm Locati

PENNSYLVANIA

Box 275, R.D. #1
Myerstown
Frystown, Pennsylvania 17067
717/933-4196

Contact: Russ Henning

Rd. #1,
Home (Indiana), Pa.
412/349-8980

Contact: Gene Schellenberger

WEST VIRGINIA

(Rt. #7)
P.O. Box 536,
KINGWOOD, W. Virginia
304/329-2631

Contact: Bob Shaffer

CANADIAN BRANCHES

ALBERTA

8739 110thA Street
Grande Prairie, Alberta
403/532-0742

Industrial Park Road
Hinton, Alberta T0E 1C0
403/865-3318

BRITISH COLUMBIA

Box 425
Elk Valley Road
Sparwood, B.C. V0B 2G0
604/425-6251

225 Edworthy Way
New Westminster, B.C. V3L 5G4
604/525-6321

1078B Eastern Street
Prince George, B.C. V2L 2Y1
604/564-8811

R.R.# 3
Box 91
Yellowknife Hwy
Kamloops, B.C. V2C 5K1
604/374-0088

NEW BRUNSWICK

Dieppe Industrial Mall
Box 1151
Dieppe (Moncton), N.B. E1A 5M7
506/854-3148

NEWFOUNDLAND

18 Cromer Avenue
Grand Falls, NFLD. A2A 1X2
709-489-5628

NOVA SCOTIA

200 Waverly Road
Dartmouth, N.S. B2X 2C1
902/435-0149

ONTARIO

275 Belfield Road (Head Office)
Rexdale, Ontario M9W 5C6
416/675-3077

535 First Street
London, Ontario N5V 1Z5
519/455-7660

1113 Webbwood Drive
Sudbury, Ontario P3C 3B6
705/675-1205

176 Gibb Street
Sault Ste. Marie, Ontario P6A 5H7
705/254-4343

P.O.Box 788
Elliot Lake, Ontario P5A 2R6
705/848-9189

910 Commerce Street
Thunder Bay, Ontario P7E 6E9
807/577-5716

791 Birch Street South
Timmins, Ontario P4N 7C5
705/264-5271

Northam Industrial Park (New Tire Mfg.
Bldg. No. 4 Plant)
Cobourg, Ontario K9A 4K2

QUEBEC

9160 Edison Street
Ville d'Anjou (Mtl.), Quebec H1J 1T1
514/353-8330

Industrial Park
1502 Blvd. Le Grand
Val d'Or, Quebec J9P 4P3
819/825-5765

DISTRIBUTOR LIST
EXPORT DEPT.

ARGENTINA

Interforest, S.R.L.
1067 Buenos Aires
ARGENTINA

AUSTRALIA

Dunlop Automotive
Box 2196T GP Melbourne
AUSTRALIA 3001

AUSTRIA

Dunlop (Austria)
Beatrixgasse 25
1031 Vienna
AUSTRIA

BARBADOS

S. McGregor Ltd.
P.O.B. 704C
Bridgetown, BARBADOS

CHILE

Bafco Ltda.
Casilla 16246
Correo 9
Santiago, CHILE

CAMEROUN

Sho Cameroun Tractaftric
B.C. 4017
Douala, CAMEROUN

ECUADOR

Servi-Tractor Cia Ltda.
Apartado de Correos 5096
Quito, ECUADOR

ENGLAND

Wogau-Intersceptre Ltd.
2 Gordon Mansions
Torrington Place
London WC1E7HE, ENGLAND

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Distributor List
Export Dept.

FRANCE

Comptoir Central du Pneumatique
75 ter Blvd. Pierre ler
33110 le Bouscat
R.C. Bordeaux 608 42
FRANCE

Provence Equipement
470 Chemin de Littoral
13016 Marseille, FRANCE

Timber-Mat S.A.
Route Nationale
60700 Fleurines
FRANCE

Barbaut S.A.
Quai D'Amont
60312 Creil Cedex
FRANCE

FRENCH GUYANA

Bandag Suriname N.V.
P.O. Box 2176
Paramaribo, SURINAME

GERMANY

Hoesch Handel Aktiengesellschaft
Sudwall 21-23
4600 Dortmund 1
WEST GERMANY

GREECE

Technical Imports Inc.
57-59 Palamidiou Street
Athens 208, GREECE

GUYANA

Associated Industries Ltd.
P.O. Box 77
Georgetown, GUYANA

IRELAND

Tyre Service & Accessories Ltd.
Bannow Road
Cabra West
Dublin 7, IRELAND

ISRAEL

Hamashbir Hamerkazi Ltd.
P.O. Box 130
Tel Aviv 61000, ISRAEL

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Distributor List
Export Dept.

JAMAICA Deryck A. Gibson Ltd.
Manufacturers Representatives
7 1/2 Haining Road
Kingston 5, JAMAICA

MIDDLE EAST Drake America Corporation
477 Madison Avenue
New York, NEW YORK 10022

NEW ZEALAND O.T.R. International
P.O.B. 4294
Hamilton East, NEW ZEALAND

PAPUA NEW GUINEA Dunlop P.N.G. Limited
Aircorpos Road
P.O.B. 383
Lae Papua, NEW GUINEA

PHILIPPINES Diamond Machinery Inc.
1353 Quezon Avenue
Quezon City Metro Manila
PHILIPPINES

PORTUGAL Orion-Commercio Geral E.
Representacoes S.A.R.L.
Avenue Elias, Garcia 49, 1
Lisbon 1, PORTUGAL

SINGAPORE Chin Seng Hin (Pty) Ltd.
2742 Blk. 90 Geyland Bahru
Kallang Basin Terrace Factories
Singapore 12, SINGAPORE

Eng Huat & Company
138 Anson Road
Singapore 2, SINGAPORE

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Distributor List
Export Dept.

SOLOMON ISLANDS R.C. Symes Pty. Ltd.
P.O.B. 88
Honiara Guadalcanal
SOLOMON ISLANDS

SOUTH AFRICA Forktyre (Pty) Ltd.
6 Richmond Road
Pinetown 3600, SOUTH AFRICA

SURINAME Bandag Suriname N.V.
P.O.B. 77
Georgetown, GUYANA

SWEDEN Svenska Dunlop AB
Hagagatan 4
Box 30
601 02 Norrkoping 1, SWEDEN

Melbergs Maskin Aktiebolag Valskog
7310 Koping, SWEDEN

THAILAND Vara Brother Supply Ltd. Part.
993 501 Vadpai
Chan Road Yanawa
Bangkok 12, THAILAND

WEST INDIES Neal & Massy Holdings Ltd.
Cockspur House, Nile Street
Bridgetown, BARBADOS

VENEZUALA Algas Enterprises Inc.
1380 N.W. 23rd Street
Miami, FLORIDA 33142