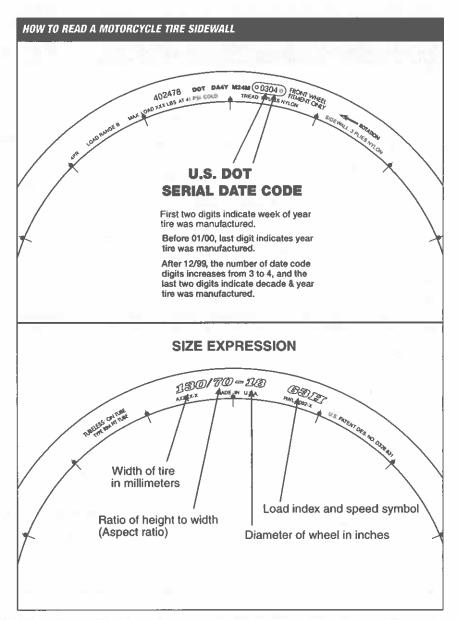
# TECHNICAL INFORMATION

#### DUNLOP MOTORCYCLE STREET TIRE SIZE CONVERSION CHART

FRONT TIRES		
METRIC	ALPHA	INCH
80/90	MH90	2.50 to 2.75
90/90	MJ90	2.75 to 3.00
100/90	MM90	3.25 to 3.50
110/90	MN90	3.75 to 4.00
120/80		4.25 to 4.50
120/90	MR90	4.25 to 4.50
130/90	MT90	5.00 to 5.10
REAR TIRES		
METRIC	ALPHA	INCH
110/90	MP85	4.00 to 4.25
120/90	MR90	4.50 to 4.75
130/80		5.00 to 5.10
130/90	MT90	5.00 to 5.10
140/80		5.50 to 6.00
140/90	MU90	5.50 to 6.00
150/80	MV85	6.00 to 6.25
150/80 150/90	MV85 MV85	6.00 to 6.25 6.00 to 6.25

#### DUNLOP MOTORCYCLE STREET TIRE SPEED RATING CHART SPEED SYMBOLS

SPEED SYMBOL	MAXIMUM SPEED
J	62 mph
K	68 mph
L	75 mph
M	81 mph
N	87 mph
Р	93 mph
Q	99 mph
R	106 mph
S	112 mph
T	118 mph
U	124 mph
Н	130 mph
V	149 mph
W	168 mph
Υ	186 mph



## LOAD INDEX

FORD HISEN		
L.I. LB.	L.I. LB.	L.I. L.B.
33 254	50 419	67 677
34 260	51 430	68 694
35 267	52 441	69 716
36 276	53 454	70 739
37 282	54 467	71 761
38 291	55 481	72 783
39 300	56 494	73 805
40 309	57 507	74 827
41 320	58 520	75 853
42 331	59 536	76 882
43 342	60 551	77 908
44 353	61 567	78 937
45 364	62 584	79 963
46 375	63 600	80 992
47 386	64 617	81 1019
48 397	65 639	82 1047
49 408	66 661	83 1074

# **SAFETY WARNING!**

The above are size-marking conversion charts and do not imply interchangeability. Consult motorcycle manufacturer and Dunlop for correct replacements for original-equipment tires. Critical clearances, motorcycle compatibility and stability, load-bearing capacity, speed rating, radial versus non-radial, pattern and tread compound requirements, inflation recommendations and front-to-rear tire matching will all vary with tire selection. Wrong selection can result in tire failure or loss of control with serious injury or death.

For further information, write Dunlop, Consumer Affairs Department, P.O. Box 1109, Buffalo, NY 14240-1109. Or call

## 1-800-845-8378 DUNLOPMOTORCYCLE.COM

**NOTE:** For tires having a maximum speed capability above 149 mph, a Z must appear in the size designation, Consult tire manufacturer for maximum speed when there is no service description.

S, H, V and Z ratings where applied are indicative of high-performance capability based on Dunlop indoor wheel testing and are not valid for damaged, altered, repaired, excessively worn, underinflated or overloaded tires. Dunlop does not recommend the use of any of its products in excess of legal speed limits. Consult the owner's manual for recommended speed rating.



# TECHNICAL INFORMATION

#### DUNLOP MOTORCYCLE OFF-ROAD TIRE INFLATION PRESSURE GUIDE

TIRE USE	FRONT PSI	REAR PSI
Motocross Hard Terrain	10 – 12	10 – 12
Motocross Intermediate Terrain	12 – 14	12 – 14
Motocross Soft Terrain	10 – 11	10 – 11
Desert/Enduro	14 – 18	14 – 18
Dual-Sport	18 – 22	16 – 26

SAFETY NOTE! These tire pressures are given as guidelines only. Actual operating pressures must be adjusted to suit specific riding conditions, surfaces, speeds and loads. Intermediate and hard-track applications will require lower pressures than soft-track applications. The 22 psi front and 22 psi rear are minimum pressures for dual-sport highway use. Pressures for dual-sport use must be increased to pressures specified by the motorcycle manufacturer for highway use.

#### DUNLOP MOTORCYCLE OFF-ROAD TIRE SIZE CONVERSION CHART

FRONT TIRES	THE PARTY NAMED IN		D_TH KSTSTE	
METRIC	METRIC	METRIC	INCH	
60/100		90/80	2.50 to 2.75	
70/100		90/80	2.75 to 3.00	
80/100	90/100	100/80	3.00 to 3.25	_
REAR TIRES				
METRIC	METRIC	METRIC	INCH	
80/100		80/90	2.50 to 3.60	
90/100		110/90	3.60 to 4.10	_
100/90	110/80			_
100/100	110/90	120/80	4.00 to 4.10	_
110/90	120/80	100/100	3.60 to 4.10	_
110/100	120/90	130/80	4.00 to 4.50	
120/100		140/80	5.00 to 5.10	_
120/90	110/100	130/80	4.00 to 4.50	_

#### DUNLOP MOTORCYCLE OFF-ROAD TIRE SIZE APPLICATION CHART

ENGINE CC	FRONT	REAR	ENGINE CC	FRONT	REAR
50	2.50-10	2.75-10	100-125 (2-stroke) / 250 (4-stroke)	80/100-21	100/100-18 or 110/90-18
60	60/100-14	80/100-12		90/100-21	100/90-19 or 110/80-19
80	70/100-17	90/100-14	250 (2-stroke) / 450 (4-stroke)	80/100-21	110/100-18 or 120/90-18
80-100	70/100-19	90/100-16		90/100-21	110/90-19 or 120/80-19
			500	80/100-21	120/100-18 or 120/90-19
				90/100-21	

Also see page 75 for additional Off-Road Motorcycle Tire Safety Information and pages 71-76 for general motorcycle tire service and safety guidelines.

#### **SAFETY WARNING!**

The above are size-marking conversion charts and do not imply interchangeability. Consult motorcycle manufacturer and Dunlop for correct replacements for original-equipment tires. Critical clearances, motorcycle compatibility and stability, load-bearing capacity, speed rating, radial versus non-radial, pattern and tread compound requirements, inflation recommendations and front-to-rear tire matching will all vary with tire selection. Wrong selection can result in tire failure or loss of control with serious injury or death. For further information, write Dunlop, Consumer Affairs Department, P.O. Box 1109, Buffalo, NY 14240-1109. Or call

1-800-845-8378 DUNLOPMOTORCYCLE.COM

# IMPORTANT SAFETY INFORMATION: FAILURE TO HEED MAY RESULT IN ACCIDENT, INJURY OR DEATH. DEALERS CONVEY THE FOLLOWING TO CUSTOMERS AND TIRE FITTERS:

- 1. Follow Tire Mounting Safety Precautions on page 75.
- 2. Checking of tire pressures is the most important tire-maintenance function you and your customer may perform. NOTE: For high-speed, fully loaded or dual-riding touring motorcycle applications, inflate front tires to maximum recommended by vehicle manufacturer for Dunlop fitment, and rear tires to maximum load inflation pressure on sidewall. Never exceed maximum load indicated on tire sidewall or vehicle capacity load found in owner's manual.
- 3. Replacements for worn, differently patterned or constructed tires will not react the same. When new tires are fitted, they should not be subjected to maximum power, abrupt lean-over or hard cornering until a reasonable run-in distance of approximately 100 miles has been covered. This will permit the rider to become accustomed to the feel of the new tires or tire combination, find the edge and achieve optimum road grip for a range of speed, acceleration and handling uses. Advise your customer to check and adjust to recommended inflation pressure after tires cool for at least three (3) hours following run-in. Remember: New tires will have a very different contact patch and lean-over edge.
- New tires, new with older and different pattern combinations require careful ride evaluation.
- 4. The letters S, H, V and Z included in the size markings of some of our street tires are speed ratings recognized by the European Tire and Rim Organization and Japanese Industry Standards. The ratings are assigned based upon controlled indoor wheel testing. Dunlop does not recommend the use of any of its products in excess of legal speed limits.
- 5. For purposes of assessing clearance, inflated section width is not the tread width. Section width is the width of the tire measured from sidewall to sidewall at the widest point in the case of most tires. The exceptions are some of the knobby tires for which the knobs on the sidewall protrude farther than the section width.
- Metric-size sport tires do not have the same load capacity as alpha-numeric (such as MT90H16) touring tires and should not be used for the same service.
- See complete service instructions and other important safety information on pages 71-76.

# SAFETY INFORMATION

# DUNLOP SAFETY ADVISORY Failure to heed may result in accident, injury or death.

The following guidelines are offered both to assist in choosing the Dunlop tires that will most closely match the motorcycling needs of your customers, and to provide the service and maintenance advice necessary for customer safety and satisfaction. Convey this important safety and service information to your tire fitters and customers.

# TIRE SELECTION, SAFETY, CARE AND MAINTENANCE TIRE SELECTION

When selecting new Dunlop motorcycle tires, be sure they meet the requirements of your customer's motorcycle and its expected usage.

For the makes and models not covered by the Dunlop Motorcycle Tire Application Guide, contact Dunlop before tires are fitted.

Fitment of radial tires to the wrong vehicle can cause instability and accidents.

Some motorcycles may be fitted only with radials. Consult motorcycle manufacturer before fitting radial replacements to ensure you are applying the correct specification and combination for your customer's motorcycle.

Some motorcycles may be fitted only with radials that match original equipment. Comply with the motorcycle owner's manual recommendations.

# FRONT AND REAR TIRE MATCHING

Remember, the correct matching of front and rear tires is important to obtain optimum performance and handling. Follow the Tire Selection guidelines.

Mount only tires marked "front wheel" on the front position and only tires marked "rear wheel" on the rear position.

A new front tire with a worn rear tire can cause instability.

Mixing radials, or mixing radials with bias or belted-bias tires, may adversely affect handling and stability, and should only be done when specifically fitted and/or recommended by an OE vehicle manufacturer. It should be noted that many factors other than tire incompatibility can affect the handling of a motorcycle, including the weight and height of the rider, mixing worn with unworn tires and the fitment of luggage or fairings. Consult the motorcycle manufacturer before making modifications from stock.

## ■ LOAD-CARRYING CAPABILITIES

Tires offering different load-carrying capacities are available. Consider carefully the weight of the motorcycle, whether it will carry passengers and

the weight of any optional equipment. Remember, the loadcarrying capability of the tires is also reduced by underinflation. It is possible to overload a tire even though it is the size specified by the motorcycle manufacturer Maximum loads and the corresponding pressures are indicated on the sidewall of all Dunlop street tires.



Before riding, the motorcyclist must determine the total weight of luggage, equipment and rider(s) to be added to the motorcycle. Instruct your customers that the total weight of luggage, equipment and rider(s) must never exceed the vehicle load capacity found in the motorcycle owner's manual, or the maximum load molded on the tire sidewall.

Instruct your customers not to pull a trailer behind their motorcycle. Trailers may contribute to motorcycle instability, grossty exaggerated tire stresses and overload. Such stresses and overload can cause irreversible damage resulting in sudden tire failure, accident, injury or death. Dunlop does not warrant tires used on motorcycles fitted with trailers.

Sidecars should not be fitted unless approved by the motorcycle manufacturer.

#### **■ MAINTAINING CLEARANCE**

Consult the motorcycle manufacturer if you intend to mount sizes other than indicated in the owner's manual. Remember the tire's physical dimensions are important,

Adequate clearance of fenders, swingarm and so on must be maintained. Increasing tire size may require an increase in rim width. When increasing tire size and/or rim width, rotate wheel and inspect closely for sufficient clearance.

#### RIM SIZE

Consult the Dunlop Technical Data Chart or Dunlop to ensure that the tires selected are correct for the rims.

Correct rim width may be crucial to handling and stability. A tire that is installed on a rim wider than recommended will have a flattened profile, and a rider may easily reach the edge of the tread during cornering. A narrow rim will alter the tire profile, concentrating tire wear in a very small area during cornering, with a smaller contact patch during braking. Remember: Tire clearances are important.

Fitment to Harley-Davidson 18-inch and 19-inch CM contour rims may result in slippage or air loss. Harley-Davidson 18-inch and 19-inch CM contour rims are not compatible with Dunlop tires. Consult Dunlop if in doubt and before fitting tires to pre-1980 Harley-Davidson motorcycles.

#### **TUBES**

Tubes are a crucial part of the tube-type wheel assembly.

When fitting a new tire on a rim requiring a tube, a new tube should be fitted at the same time. Old tubes become stretched and if an old tube is fitted within a new tire, it can crease and fail due to thinning of the tube rubber. Tubes should be repaired only by an expert. Secure tube valve assembly to rim with care. Inspect rim band and consult motorcycle dealer for correct rim band replacement.

Always check the size markings on the tube to ensure that the tire size appears on the tube. Do not fit tubes in radial motorcycle tires, nor fit radials on rims requiring tubes, unless the tubes bear matching size and radial (R) markings.

#### **■ TIRE INSTALLATION (SEE ALSO TIRE MOUNTING)**

Dunlop street tires have balance dots in the bead or sidewall area to indicate the lightest point of the tire. All Dunlop street tires should be installed with these balance dots at the valve. All Dunlop street tires also have arrows on the sidewall, which indicate the correct direction of rotation.

Positioning of balance marks and inclusion of directional arrows are not universal among motorcycle tire manufacturers.

#### ■ TIRE PRESSURES (SEE ALSO TIRE MOUNTING)

Follow pressure recommendations shown on the Dunlop Motorcycle Tire Application Guide. Contact Dunlop if year and model are not shown on the current guide and the owner's manual does not list pressure settings for Dunlop tires.

Keep in mind that hard cornering, passengers, heavy loads and sustained high speeds will require higher pressures (up to that indicated on the sidewall).



CHECKING TIRE PRESSURE IS THE MOST IMPORTANT TIRE MAINTENANCE FUNCTION YOU AND YOUR CUSTOMER CAN PERFORM.

For high-speed, fully loaded or dual-riding touring-motorcycle applications, inflate tires to maximum recommended by vehicle manufacturer for Dunlop fitment. Never exceed maximum load indicated on tire sidewall or vehicle capacity load found in owner's manual, whichever is lower.

Underinflated tires can result in imprecise cornering, higher running tem-

peratures, irregular tread wear, fatigue cracking, overstressing and eventual failure of the tire carcass, or loss of control, which could cause accident, injury or death.

Overinflating tires does not increase load-carrying capacity, but will result in a hard ride and accelerated tire wear in the center of the contact patch.



Dunlop recommends using a gauge that holds the pressure reading.

Advise your customers to check cold tire pressure frequently with a good-quality gauge that holds a reading, and always before extended trips.

Loss of pressure may occur due to worn-out or badly seated valve cores. Check valve cores, and if necessary, tighten for correct seating, or remove and replace them. A metal or hard-plastic valve cap with an inner gasket should be used and installed finger-tight to protect the valve core from dust and moisture and to help maintain a positive air seal.

Loss of pressure may also be caused by tube damage, as well as cracked rubber tube or tubeless valve stem bases. Inspect rim bands, tubes and valves. Replace if damage or cracking is noted.

Repeated loss of inflation pressure may result from undetected tire damage. Visually inspect tires for punctures, cuts, abrasions, cracks, bulges, blisters or knots. It will be necessary to dismount the tire to complete an inspection for internal damage and any need for repair. See the Tire Repair section. Only certain punctures in the tread area may be repaired, and only if no other damage is present.

The appearance of stress cracks in the tread grooves is one indicator of overload and/or underinflation. If you find evidence of tread-groove cracking, you should remove and replace the tire immediately. This damage is permanent and non-repairable.

Tires with non-repairable damage must not be used again (see Tire Repair). Damage caused by impacts, penetrations or continued underinflated/overloaded use is progressive and can result in sudden and complete tire failure and accident, injury or death.

Your customers should always seek expert inspection of the dismounted tire following curb, chuckhole or other impacts, evidence of penetration beyond the tire surface, bulges or low pressure. They should not continue riding on such tires.

Advise your customers to inspect their tires frequently for damage and to always heed warning signs such as vibration, handling instability, rubbing or tire noise that occurs during operation of the motorcycle.

#### MINIMUM TREAD DEPTH

Always remove tires from service before they reach the tread-wear indicator bars (1/32 of an inch tread pattern depth remaining). Worn/unworn tire combinations and worn tires used in wet conditions can result in deteriorated handling.

#### ■ SPEED RATINGS

S, H, V and Z ratings where applied are indicative of high-performance capability based on Dunlop indoor wheel testing and are not valid for damaged, altered, repaired, excessively worn, underinflated or overloaded tires. Dunlop does not recommend the use of any of its products in excess of legal speed limits. Consult the owner's manual for recommended speed rating.

#### DYNAMOMETER TESTING

Never subject a tire on the motorcycle to dynamometer engine testing. This severe use of the tire may result in tread compound degradation and subsequent failure.

#### RUN-IN PERIOD

Replacements for worn, differently patterned or constructed tires will not react the same. When new tires are fitted, they should not be subjected to maximum power, abrupt lean-over or hard cornering until a reasonable run-in distance of approximately 100 miles has been covered. This will permit the rider to become accustomed to the feel of the new tires or tire combination, find the edge and achieve optimum road grip for a range of speeds, acceleration and handling uses. Advise your customer to check and adjust inflation pressure to recommended levels after tires cool for at least three (3) hours following run-in. Remember, new tires will have a very different contact patch and lean-over edge. New tires, mixing a new tire with a worn tire and mixing different pattern combinations may adversely affect ride and handling and will require careful ride evaluation.

#### TIRE REPAIR

Some punctures in motorcycle tires may be repaired.

Dunlop recommends only permanent plug-patch repairs of small (maximum 1/4-inch diameter) tread-area punctures from within the dismounted tire by a qualified tire repair shop or motorcycle dealer. Never perform an exterior repair and never use an inner tube as a substitute for a proper repair. Speed should not exceed 50 mph for the first 24 hours after repair, and the repaired tire should never be used over 75 mph. Advise your customer to check inflation pressure after tire cools for at least three (3) hours following run-in, or sooner if air loss is suspected. See the Dunlop Service Advisory for additional motorcycle tubeless-tire repair information. Follow the same repair procedures for tires on rims requiring tube replacement. The repairer is solely responsible for the repair and any instructions to the repaired-tire user.

Advise your customers that no form of temporary repair should be attempted because secondary damage caused by a penetrating object may not be detected and tire or tube deflation may occur at a later date.

Dunlop does not recommend the use of liquid sealants. These are a form of temporary repair, and they may adversely affect ply material and mask secondary damage caused by a penetrating object. Advise your customers that reliance upon sealants can result in sudden tire failure and accident.

#### RETREADING AND OTHER MODIFICATIONS

Never use a Dunlop motorcycle tire that has been retreaded (recapped). Such tires are remanufactured products for which Dunlop's new tire testing and certifications are voided. Dunlop motorcycle tires are not designed for retreadability (recappability), nor will Dunlop be responsible for any retread process or performance.

Never use a Dunlop motorcycle tire that has been modified by the removal or addition of any material by tread grooving, siping, grinding or contouring, nor with any inlays or raised features (e.g., lettering) of any kind. Such tires are remanufactured products for which Dunlop's new tire testing and certifications are voided.

## MOTORCYCLE MAINTENANCE

Dunlop strongly recommends regular inspection of the motorcycle generally, and of wheels in particular, because tire mileage and performance are adversely affected by a poorly maintained vehicle. Advise your customers to bring their motorcycles to the motorcycle dealer for regular maintenance checks, inclusive of tire inspections.

Advise your customers to maintain suspension settings in strict compliance with vehicle owner's manual. Improperly maintained components and incorrect or unbalanced front fork pressures will affect stability. Low suspension pressure will generate excessive tire stresses.

# SAFETY INFORMATION

#### WHEEL BALANCE

It is essential that tire/wheel assemblies be balanced before use and rebalanced each time the tire is removed or replaced. Unbalanced tire/wheel assemblies can vibrate at certain speeds, and tire wear will be greatly accelerated.

All Dunlop street tires should be installed with the balance dot at the valve. Wheels may be balanced with spoke nipple weights, lead wire or self-adhesive rim weights. Consult the motorcycle manufacturer for approved wheel weights.

Dunlop does not recommend the use of dry or liquid balancers/sealers and will not warrant tires into which these materials have been injected. Tire and wheel assembly balance must be checked with a balance stand or computer wheel balancer,

#### ■ WHEEL ALIGNMENT

Be sure to align the wheels each time the rear wheel is removed or the chain or belt is adjusted. Each revolution of an incorrectly aligned wheel can scuff off tread rubber, reduce tire mileage and impair steering and cornering.

#### **SPOKES**

Replace immediately any broken spokes and tighten any loose ones. Broken spokes transfer additional tension to adjoining spokes, creating the potential for further spoke failures. After tightening or replacing spokes, be sure that the wheel rims run true.

Inspect the rim, rim band and tube, and replace any of these components if they are damaged before refitting the tire.

Both broken and loose spokes may cause wheel wobble, thus accelerating tire wear, and could cause instability.

#### **■ WHEEL INSPECTION**

Bent wheel rims and bent or cracked cast wheels should be replaced immediately.

Bent rims may cause wheel wobble, bead unseating and, in the case of tubeless tires, gradual air loss. Sudden wheel failure may result from the use of cracked cast wheels. Advise your customers of these conditions and their consequences.

#### **■ TUBE-TYPE RIMS**

Note: Not all cast wheels, whether aluminum or magnesium, are suitable for tubeless-tire fitment.

Mount tires as tubeless only when the wheel manufacturer recommends it. Some spokeless rims require tubes, With a tube inserted, a tubeless tire may be fitted to a tube-type wheel.

Exception: Dunlop does not recommend fitment of non-radial tubes in radial tires, Ensure that tube markings match radial tire markings before fitting to rims requiring tubes.

#### **SIDEWALL TREATMENT**

Use a mild soap solution to clean sidewalls, white striping or lettering, and rinse off with plain water. Never apply any other material, cleaners or dressings to enhance sidewall appearance. These may degrade the rubber and remove inherent ozone cracking/weather checking resistance.

### TIRE STORAGE PRECAUTIONS

Tires can be damaged as a result of poor storage conditions and such damage can affect tire performance and functioning and may eventurally lead to tire failure.

Stored tires should be protected against environmental effects such as sunlight, ozone and other potentially damaging conditions.

Do store tires where the area is clean, dry, well ventilated and the ambient temperatures are temperate.

Do not store tires where the area is dirty or wet, or exposed to petroleum-based products or sovents.

Do not store tires where they are exposed to direct sunlight, extreme hot/cold temperatures or ozone-generating sources such as electric motors, battery chargers, generators or welding equipment.

#### OIL AND GASOLINE

Prolonged contact with oil or gasoline causes contamination of the rubber compound, making the tire unsuitable for use. Wipe off any oil or gasoline immediately with a clean rag.

Do not use any tire that has been exposed to oil, gasoline, corrosives or non-rubber-compatible liquids.

#### **TIRE MOUNTING**

Danger Only specially trained persons should mount tires. Improper mounting can cause tire explosion and serious injury.

#### FOLLOW THESE MOUNTING PRECAUTIONS:

- · Wear approved eye protection.
- · Clean and lubricate beads and rim.
- Centralize rim band and tube to prevent pinching if tube-type rim.
- Note directional arrows on sidewall where applicable.
- Lock assembly on mounting machine or place in safety cage before inflating to seat beads.
- Set air hose relief valve at 40 psi.
- Use extension gauge and hose with clip-on air chuck. Stand back with no part of your body within the perimeter of the assembled tire and rim.
- · Inflate with core in valve stem.
- Never inflate above 40 psi to seat beads.\*
- Spin wheel to check bead seating and alignment.

"If the beads do not seat by 40 psi, deflate and repeat above procedures. Never use a volatile substance or rubber donut to aid bead seating. If the tire is a tube-type, deflate and reinflate after seating to prevent tube wrinkles.

D402 PT bead-lock tires may be mounted only on matching Harley-Davidson FXRP, FLHTP or FLHP rims. Consult the owner's manual.

#### NEVER MOUNT PASSENGER-CAR TIRES ON MOTORCYCLE RIMS

### ■ DUAL-SPORT AND ON-/OFF-ROAD TIRES

Safety note: The minimum pressure for dual-sport highway use is 22 psi front and 22 psi rear. Pressures for dual-sport use must be increased to pressures specified by the motorcycle manufacturer for highway use.

#### SAFETY TIPS FOR THE OFF-ROAD MOTORCYCLIST

- 1. Air pressure: Always maintain the recommended tire pressure for the type of terrain on which the motorcycle is being ridden; check the owner's manual. Underinflated tires may cause wheel damage when ridden on rocky, rough terrain and allow the motorcycle to squirm or wander on smooth, hard terrain. Overinflation may damage the tires and cause an unnecessarily harsh ride. To accurately measure tire pressure, use a standard tire-pressure gauge.
- Condition: 

  ✓ Check for cuts and gouges that may cause air leakage. Also check the tires for missing knobs and excessively worn tread.
- 3. Wheels: 

  To avoid loss of control or injury, make sure axle nuts are tight and secured. Grasp each tire at the front and rear and try to rock it on its axle to detect worn-out bearings or loose nuts. There should be no free play or slip as you rock the wheel. Inspect wheels for broken or loose spokes and for cracks on the hub or rim.

#### ■ REGISTER YOUR TIRES

When you purchase new motorcycle tires, be sure to register them. Registration information can be found on the Dunlop web site at dunlopmotorcycle.com, or utilize the registration card you obtained from your dealer.

#### ADDITIONAL SAFETY INFORMATION AND TRAINING

For additional safety information, read your vehicle owner's manual and any safety decals, and call the Motorcycle Safety Foundation (949) 727-3227, or the Specialty Vehicle Institute of America (949) 727-3727. Or write the above at 2 Jenner St., Suite 150, Irvine, CA 92618-3806.

DUNLOP SUPPORTS RIDER EDUCATION.
FOR A MOTORCYCLE RIDER COURSE NEAR YOU, CALL
1-800-446-9227



## MOTORCYCLE TUBELESS-TIRE REPAIR INFORMATION

Dear Dunlop Dealer:

This responds to the numerous requests for motorcycle tubeless-tire repair information,

Dunlop recommends only permanent repairs performed from the inside of the tire, using a combination patch/plug method. Never attempt a repair from the outside or inject a sealant, or simply use an inner tube, a patch or a plug as a substitute for a proper repair.

Only a qualified tire repair shop or motorcycle tire dealer should perform repairs. Inspection of the tire and adequacy of repair becomes the responsibility of the person actually performing the repair and Dunlop does not warrant the results of a repair in any way. Combination patch/plug repair kits for use by the repair shop or dealer are commercially available with accompanying instructions.

Before any repair should be attempted, however, a tire must be removed from the wheel and thoroughly inspected. The following are minimum guidelines for the repairer:

Tires should not be repaired if any of the following conditions exist:

- 1. A tire has been previously injected with a sealant/balancer.
- 2. The puncture is larger than 6mm (1/4 inch) in diameter.
- 3. The puncture is not perpendicular to the carcass.
- 4. The puncture is in the tire sidewall.
- 5. Separation of plies, tread separation or separation of any other components.
- 6. Cut or broken ply cords.
- 7. Broken or damaged bead wires.
- 8. Cut or damaged chafers (bead area).
- 9. Deterioration of the carcass inside the tire due to being run flat or underinflated.
- 10. Cracks or other damage to the integrity of the inner liner.
- 11. Excessive wear—tire should have at least 1/32 of an inch of tread depth, excluding tread-wear indicators.
- 12. Cracks in sidewall or tread.
- 13. Impact breaks, cuts, snags or gouges that penetrate the surface.

#### NOTE:

- A. There should be no more than one repair in any quarter of the tire and no more than two repairs per tire.
- B. The wheel itself must be in good condition. Any cracked or bent wheel, however slightly, may allow the loss of air and cause subsequent deflation of the tire.
- C. Following repair, the valve assembly should be replaced and the tire/wheel rebalanced.
- D. Speed should not exceed 50 mph for the first 24 hours after tire repair, and the repaired tire should never be used at speeds over 75 mph.

THE REPAIRER IS SOLELY RESPONSIBLE FOR INSTRUCTING THE MOTORCYCLIST AS TO THE RESTRICTIONS TO BE PLACED ON TIRE USE FOLLOWING REPAIR.

In summary, NO form of temporary repair should be attempted. Any doubt as to inspection or adequacy of repair should be resolved by discarding the tire.

Be sure to consult our *Motorcycle Tire Limited Warranty, Care and Maintenance* brochure for additional information regarding the use of Dunlop tires, and convey important safety information to your customers.

### Regards,

The Dunlop Motorcycle Tire Performance Team