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MERITOR®

Revised 01-05

9- and 10-Speed Manual Transmissions

Operator Manual TP-8989

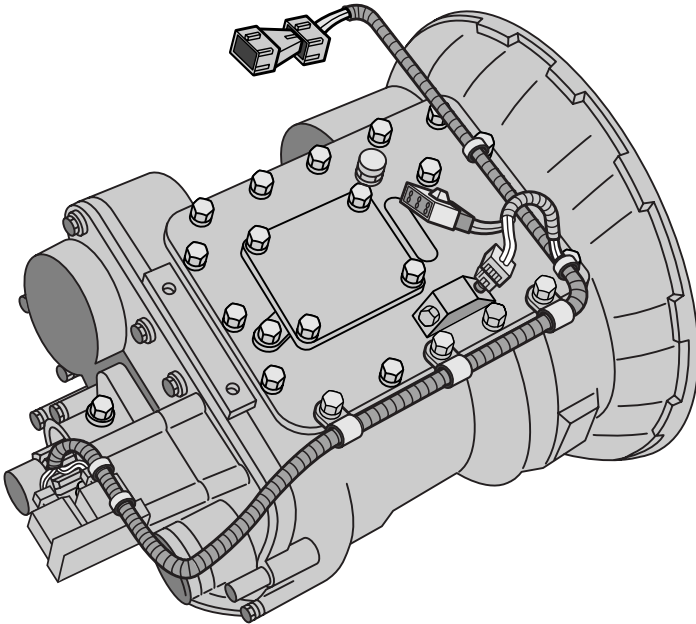
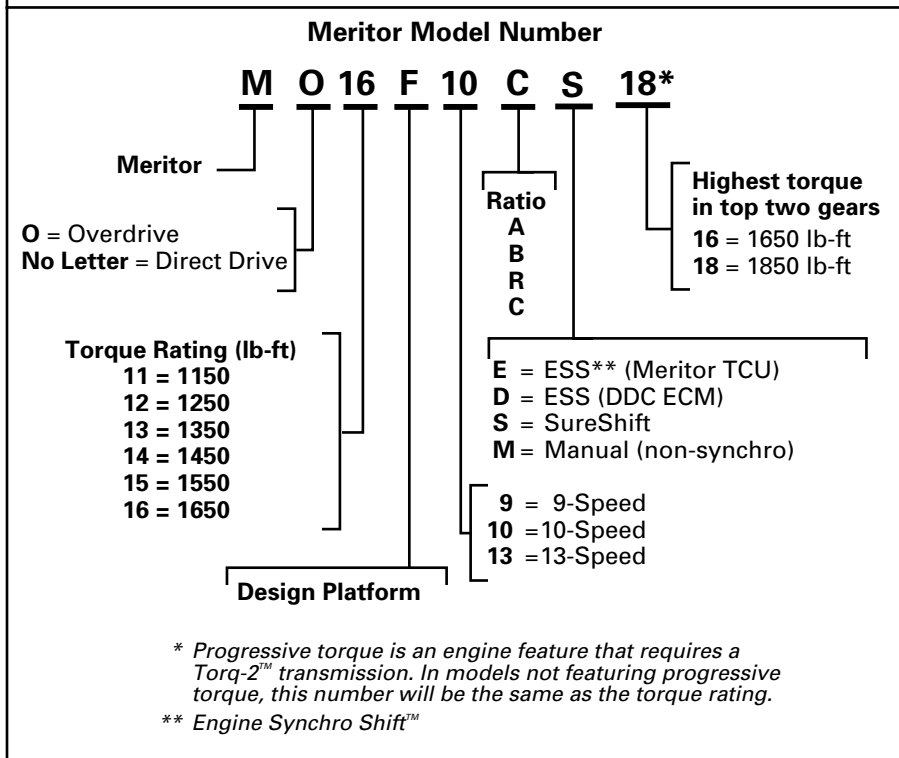
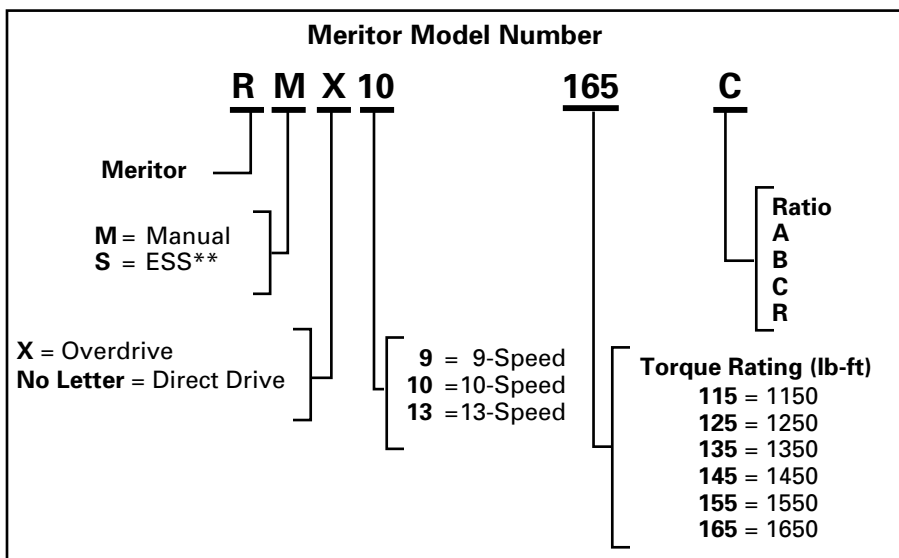


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WARNING

Use the information in this section to correctly operate the vehicle and prevent serious personal injury and damage to components.

How to Use the Clutch

Use the Clutch for Initial Gear Engagement When the Vehicle is Stationary

Use the clutch brake for initial gear engagement when the vehicle is stationary. If you use the clutch brake when the vehicle is moving, the clutch brake tabs can break and damage the input shaft, transmission, and first and reverse sliding collar.

Do Not Coast in Neutral With the Clutch Disengaged

If you coast in Neutral with the clutch disengaged, lubricants will be unable to pass to the thrust washers. Damage to the washers and mainshaft can result.

Always Use the Clutch to Change Gears

You must use the clutch to change gears. The clutch enables the gear teeth to engage correctly.

What Happens When You Do Not Use the Clutch

- The gear teeth grind instead of engage and can damage the shift forks, sliding collars and gears.
- Metal particles from the damaged parts can fall into the lubricant and damage the bearings.
- The transmission becomes difficult to shift or slips out of gear.

Operating a Vehicle on a Hill or Grade

- Downshift to the next lower gear before descending a hill or grade.
- Upshift to the next higher gear before ascending a hill or grade.

Use the Correct Gear to Prevent Shock Load

Use the correct gear to prevent shock load. Shock load can damage gear teeth immediately or cause damage that appears later.

When to Shift the Transmission

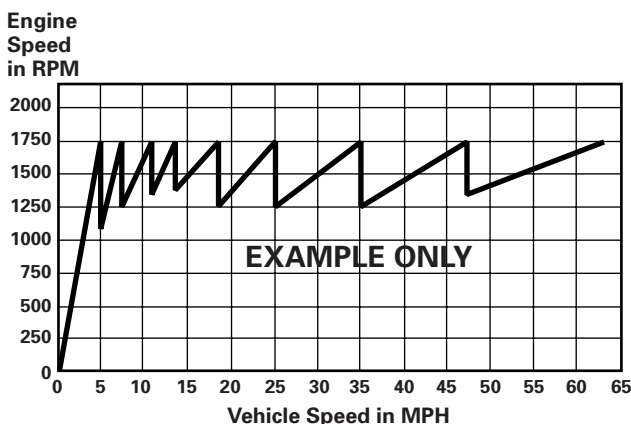
Shift the transmission at the correct engine speed (RPM) and at the manufacturer's recommended vehicle speed to prevent gears from grinding.

Engine Torque Curves Define Correct RPM or MPH Speeds

Shifting at the correct RPM enables the transmission to operate economically. Engine torque curves vary by vehicle, because RPM and MPH values are determined by engine specifications, rear axle ratio and tire size.

If you change the engine, rear axle or tires from the vehicle's original equipment, you must obtain a new Torque Split Chart to ensure that the transmission operates correctly.

Refer to the vehicle manufacturer's engine torque curves to determine a vehicle's correct RPM or MPH. A typical chart is shown below.



Shift the Range Selector When the Transmission is in Gear (Preselect)

Do not move the shift lever to Neutral and then move the range selector. This causes the gear change to occur **BEFORE** the range changes. Damage to the synchronizer can result.

Drain Moisture from the Air Reservoir Every Day

When you drain moisture from the air reservoir, you help prevent moisture and contaminants from entering the system, which can affect operation and damage components.

Remove Axle Shafts When You Tow a Vehicle With the Rear Wheels on the Ground

Remove axle shafts when you tow a vehicle with the rear wheels on the ground. If you do not remove the axle shafts, the towing angle will not allow lubricants to reach the transmission mainshaft thrust washers and axle pinion bearings. Damage to these components will result.

Refer to technical bulletin TP-9579, Driver Instruction Kit, for complete procedures on how to correctly tow a vehicle. Call ArvinMeritor's Customer Service Center at 800-535-5560 to obtain this publication.

Optional Transmission Temperature Indicator Light or Temperature Gauge



CAUTION

Do not operate the transmission when the optional temperature indicator light comes ON, or the optional temperature indicator gauge is in the “WARNING” area. These are indications that the transmission is overheating. Stop the vehicle. Service the transmission as required to prevent damage to components.

Some vehicles use an optional transmission temperature light or optional transmission temperature gauge that enables you to verify that the transmission is operating within normal temperatures. Refer to the vehicle’s operating instructions for more information.

The temperature indicator light will come ON, or the gauge indicator will be in the “WARNING” area, when the transmission is overheating.

- **If the transmission is overheating:** Stop the vehicle. Service the transmission as required.

Parking a Vehicle



WARNING

You must place the transmission into Neutral and follow the vehicle manufacturer’s procedures when you park a vehicle. If the transmission is in gear when you start the vehicle, the vehicle can suddenly move forward. Serious personal injury and damage to components can result.

1. Bring the vehicle to a stop.
2. Place the transmission into Neutral.
3. Apply the parking brake. Refer to the vehicle manufacturer’s instructions for the correct procedures.

Shift-n-Cruise™ Speed Control Feature



WARNING

Only use the Shift-n-Cruise™ speed control feature when you operate a vehicle under normal operating conditions. Do not use this feature in heavy traffic or on winding, wet or slippery roads. These conditions can affect cruise control performance, which can result in loss of vehicle control, serious personal injury and damage to components.



CAUTION

You must use your finger to press the Shift-n-Cruise™ speed control PAUSE, RESUME or SET buttons located on the shift knob. If you use a screwdriver, ballpoint pen or any sharp item, a button can stick in the switch assembly and affect speed control operation. Damage to components can result.

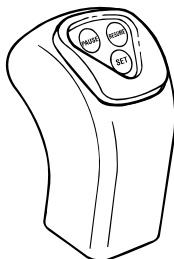
The Shift-n-Cruise™ speed control feature integrates cruise control functions into the transmission shift knob. You can use the cruise feature after a shift without removing your hand from the shift knob.

The PAUSE, RESUME and SET buttons are located on the TOP of the shift knob. **Figure 2.1.** The ON/OFF controls are located on the instrument panel.

How to Use the Shift-n-Cruise™ Speed Control Feature

- Press the SET button to select cruise speed.
- Press the PAUSE button to temporarily deactivate speed control.
- Press the RESUME button to return to the speed you selected at SET.

Figure 2.1



How to Shift 9-Speed “A” and “B” Ratio Manual Transmissions



CAUTION

You must use the correct starting gear when you operate the transmission. Do not shift into Neutral and coast. Damage to the transmission can result.

Use the clutch brake only for initial gear engagement when the vehicle is stationary to prevent damage to the input shaft and the clutch brake.

Before You Start the Vehicle

1. Check that transmission fluid is at the specified level.
2. Check that the transmission is in Neutral.

Start the Vehicle



WARNING

The transmission must be in Neutral when you start the vehicle. If the transmission is in gear, the vehicle will move forward suddenly. Serious personal injury and damage to components can result.

1. The shift lever must be in Neutral.
2. Press the clutch pedal to the end of travel.
3. Start the engine. Allow air pressure in the system to reach the specified range on the gauge.
4. Release the clutch pedal.
5. Release the parking brakes.

Section 3

9-Speed Transmissions



Shifting Into Reverse



CAUTION

Only use the clutch brake for initial gear engagement when the vehicle is stationary. If you use the clutch brake when the vehicle is moving, the clutch brake tabs can break. Damage to the input shaft, transmission, and first and reverse sliding collar can result.

Never range shift while in reverse. The synchronizer will not function in reverse. Range shifting while in Reverse can result in damage to the transmission.

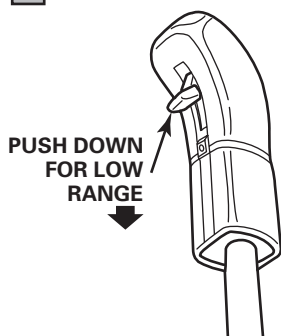
NOTE: Use low range when you shift into Reverse.

1. Move the range lever **DOWN** into low range. **Figure 3.1.**

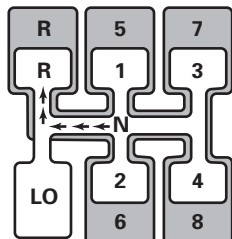
NOTE: Disengaging the clutch stops the transmission for initial gear engagement.

2. Disengage the clutch. Press the clutch pedal to the end of travel. The clutch release bearing will engage the clutch brake.
3. With the clutch pedal at the end of travel, move the shift lever into Reverse. **Figure 3.1.**
4. Slowly release the clutch pedal to move the vehicle in the reverse direction.

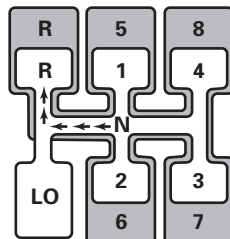
Figure 3.1



NINE-SPEED DIRECT OR OVERDRIVE TRANSMISSIONS WITH THE STANDARD SHIFTING PATTERN



NINE-SPEED RMO MODELS



Shifting Into a Forward Starting Gear and Upshifting



CAUTION

Only use the clutch brake for initial gear engagement when the vehicle is stationary. If you use the clutch brake when the vehicle is moving, the clutch brake tabs can break. Damage to the input shaft, transmission, and first and reverse sliding collar can result.

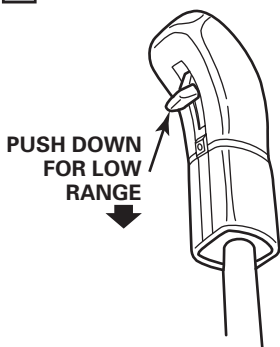
Meritor recommends shifting into low, first, second or third gear as a starting gear.

Low Gear

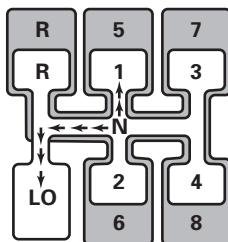
NOTE: Use low gear when moving a loaded vehicle from a stationary position up a grade.

1. Push the range lever DOWN into low range. **Figure 3.2.**
2. Disengage the clutch. Press the clutch pedal to the end of travel. The clutch release bearing will engage the clutch brake.
3. With the clutch pedal at the end of travel, move the shift lever into low gear. **Figure 3.2.**
4. Slowly release the clutch pedal.

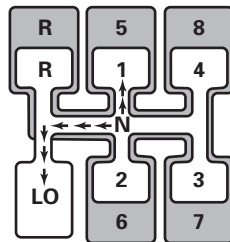
Figure 3.2



NINE-SPEED DIRECT OR OVERDRIVE TRANSMISSIONS WITH THE STANDARD SHIFTING PATTERN



NINE-SPEED RMO MODELS



Section 3

9-Speed Transmissions

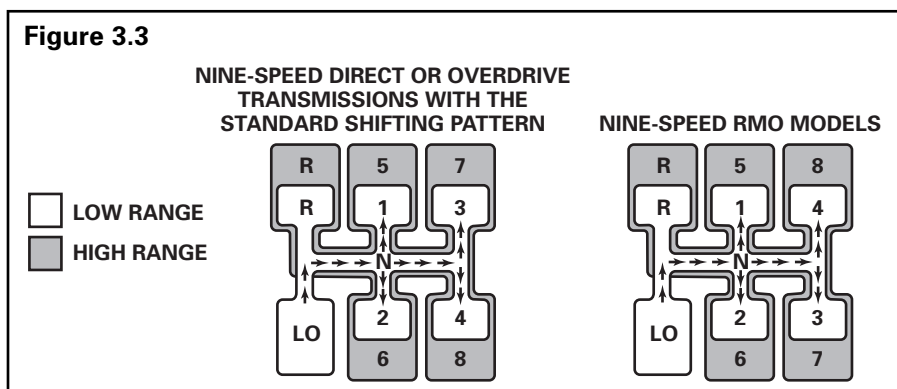


First Gear

1. Release the accelerator.
2. Press the clutch pedal until the clutch disengages.
3. Move the shift lever into Neutral.
4. Release the clutch pedal.
5. Allow the engine to slow to the correct RPM.
6. Press the clutch pedal until the clutch disengages.
7. Move the shift lever into first gear. **Figure 3.3.**
8. Release the clutch pedal. Apply the accelerator.

Second, Third and Fourth Gears

To upshift into second, third and fourth gears: Repeat Steps 1-8 above, but move the shift lever into the correct second, third and fourth gears. **Figure 3.3.**



Fifth Gear



CAUTION

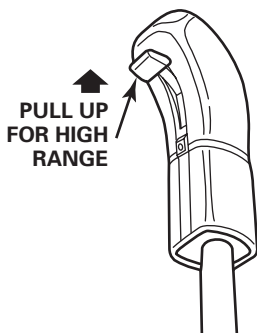
Move the range lever only when the transmission is in gear to prevent damage to the transmission.

1. While in fourth gear, preselect by moving the range lever UP to shift the range selector valve into high range. **Figure 3.4.**
2. Release the accelerator.
3. Press the clutch pedal until the clutch disengages.

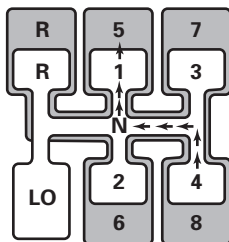
NOTE: The range cylinder will automatically shift into high range when the shift lever is in Neutral.

4. Move the shift lever into Neutral.
5. Release the clutch pedal.
6. Allow the engine to slow to the correct RPM.
7. Press the clutch pedal until the clutch disengages.
8. Move the shift lever into fifth gear. **Figure 3.4.**
9. Release the clutch pedal. Apply the accelerator.

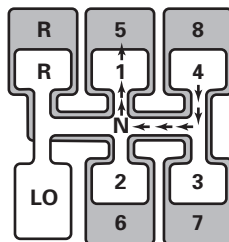
Figure 3.4



NINE-SPEED DIRECT OR OVERDRIVE TRANSMISSIONS WITH THE STANDARD SHIFTING PATTERN



NINE-SPEED RMO MODELS



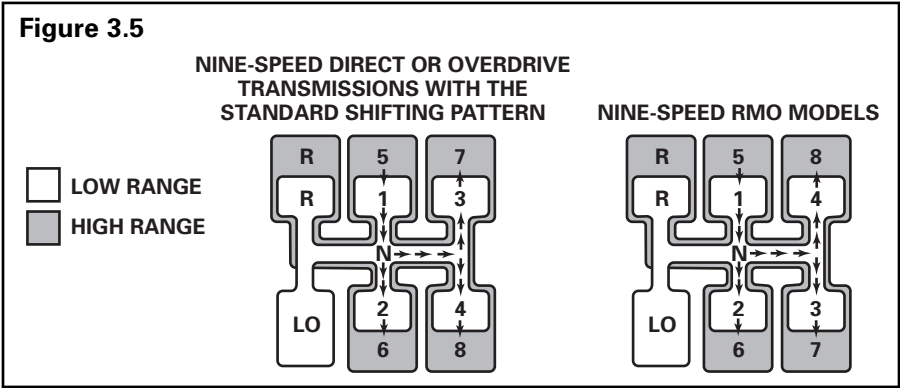
Section 3

9-Speed Transmissions



Sixth, Seventh and Eighth Gears

To upshift into sixth, seventh and eighth gears: Repeat Steps 2-9 on the previous page, but move the shift lever into the correct sixth, seventh and eighth gears. **Figure 3.5.**

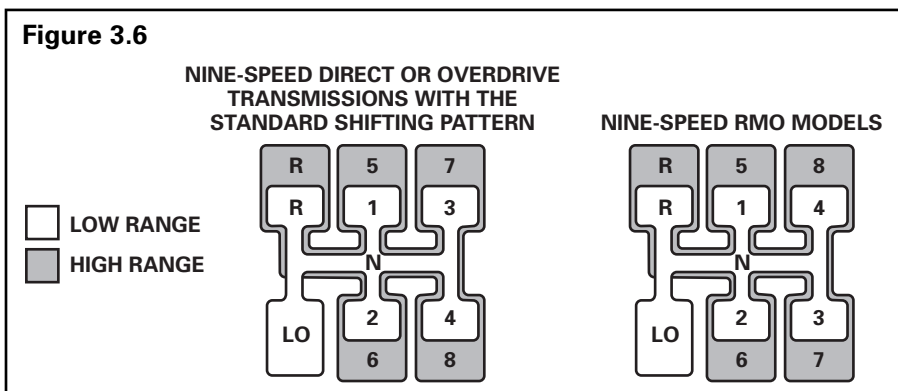


How to Downshift

Eighth, Seventh and Sixth Gears

1. Release the accelerator.
2. Press the clutch pedal until the clutch disengages.
3. Move the shift lever into Neutral.
4. Release the clutch pedal.
5. Apply the accelerator to increase the engine speed to the correct RPM.
6. Release the accelerator and immediately press the clutch pedal until the clutch disengages.
7. Move the shift lever into the correct gear. **Figure 3.6.**
8. Release the clutch pedal.

Figure 3.6



Section 3

9-Speed Transmissions



Fifth Into Fourth Gear



CAUTION

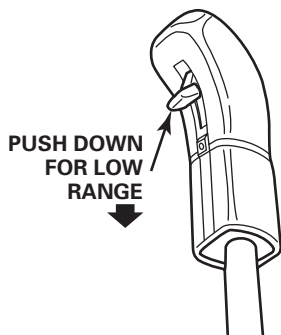
Move the range lever only when the transmission is in gear to prevent damage to the transmission.

1. While in fifth gear, preselect the moving the range lever DOWN to shift the range selector valve into low range. **Figure 3.7.**
2. Release the accelerator.
3. Press the clutch pedal until the clutch disengages.

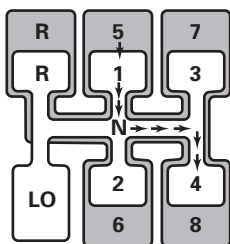
NOTE: The range cylinder will automatically shift into low range when the shift lever is in Neutral.

4. Move the shift lever to Neutral.
5. Release the clutch pedal.
6. Apply the accelerator to increase engine speed to the correct RPM.
7. Press the clutch pedal until the clutch disengages.
8. Move the shift lever into fourth gear.
9. Release the clutch pedal. Apply the accelerator.

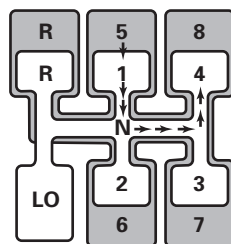
Figure 3.7



NINE-SPEED DIRECT OR OVERDRIVE TRANSMISSIONS WITH THE STANDARD SHIFTING PATTERN



NINE-SPEED RMO MODELS



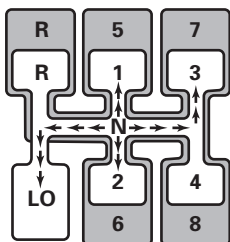
From Third, Second, First and Low Gears

To downshift into third, second, first and low gears: Repeat Steps 2-9 on page 14, but move the shift lever into the third, second, first and low gears. **Figure 3.8.**

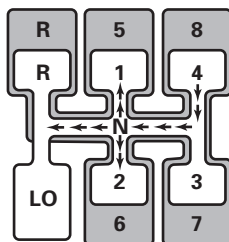
Figure 3.8

NINE-SPEED DIRECT OR OVERDRIVE TRANSMISSIONS WITH THE STANDARD SHIFTING PATTERN

□ LOW RANGE
■ HIGH RANGE



NINE-SPEED RMO MODELS



Section 4

10-Speed Transmissions



How to Shift 10-Speed Manual Transmissions



CAUTION

You must use the correct starting gear when you operate the transmission. Do not shift into Neutral and coast. Damage to the transmission can result.

Before You Start the Vehicle

1. Check that engine oil is at the specified level.
2. Check that the transmission is in Neutral.

Start the Vehicle



WARNING

The transmission must be in Neutral when you start the vehicle. If the transmission is in gear, the vehicle will move forward suddenly. Serious personal injury and damage to components can result.

1. The shift lever must be in Neutral.
2. Press the clutch pedal to the end of travel.
3. Start the engine. Allow air pressure in the system to reach the specified range on the gauge.
4. Release the clutch pedal.
5. Release the parking brakes.

Shifting Into Reverse



CAUTION

Only use the clutch brake for initial gear engagement when the vehicle is stationary. If you use the clutch brake when the vehicle is moving, the clutch brake tabs can break. Damage to the input shaft, transmission, and first and reverse sliding collar can result.

Never range shift while in reverse. The synchronizer will not function in reverse. Range shifting while in Reverse can result in damage to the transmission.

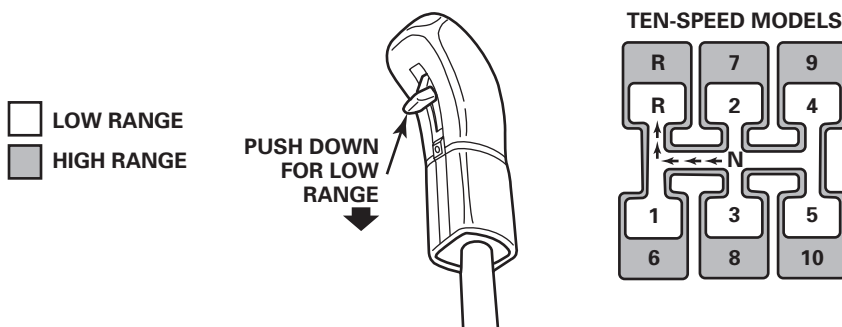
NOTE: Use low range when you shift into Reverse.

1. Move the range lever **DOWN** into low range. **Figure 4.1.**

NOTE: Disengaging the clutch stops the transmission for initial gear engagement.

2. Disengage the clutch. Press the clutch pedal to the end of travel. The clutch release bearing will engage the clutch brake.
3. With the clutch pedal at the end of travel, move the shift lever into Reverse. **Figure 4.1.**
4. Slowly release the clutch pedal to move the vehicle.

Figure 4.1



Section 4

10-Speed Transmissions



Shifting Into a Forward Starting Gear and Upshifting



CAUTION

Only use the clutch brake for initial gear engagement when the vehicle is stationary. If you use the clutch brake when the vehicle is moving, the clutch brake tabs can break. Damage to the input shaft, transmission, and first and reverse sliding collar can result.

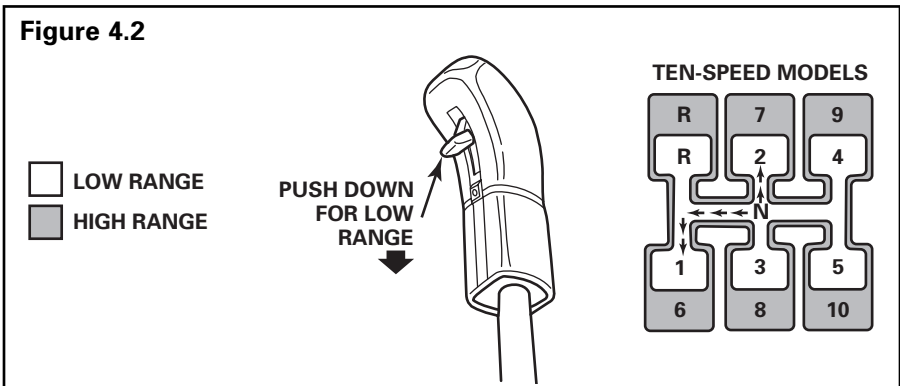
Meritor recommends shifting into first, second or third gear as a starting gear.

First Gear

NOTE: Use first gear when moving a loaded vehicle up a grade from a stationary position.

1. Push the range lever **DOWN** into low range. **Figure 4.2.**
2. Disengage the clutch. Press the clutch pedal to the end of travel. The clutch release bearing will engage the clutch brake.
3. With the clutch pedal at the end of travel, move the shift lever into first gear. **Figure 4.2.**
4. Slowly release the clutch pedal.

Figure 4.2



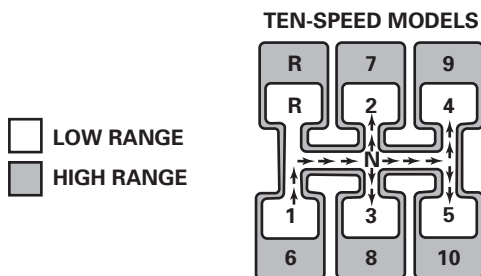
Second Gear

1. Release the accelerator.
2. Press the clutch pedal until the clutch disengages.
3. Move the shift lever to Neutral.
4. Release the clutch pedal.
5. Allow the engine to slow to the correct RPM.
6. Press the clutch pedal until the clutch disengages.
7. Move the shift lever into second gear. **Figure 4.3.**
8. Release the clutch pedal. Apply the accelerator.

Third, Fourth and Fifth Gears

To upshift into third, fourth and fifth gears: Repeat Steps 1-8 above, but move the shift lever into the third, fourth and fifth gears.
Figure 4.3.

Figure 4.3



Section 4

10-Speed Transmissions



Sixth Gear



CAUTION

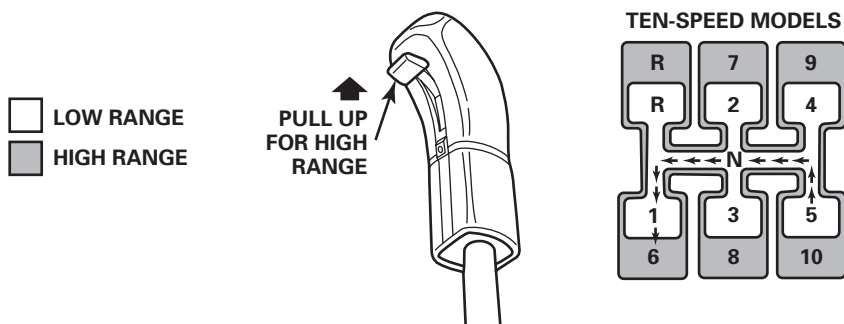
Move the range lever only when the transmission is in gear to prevent damage to the transmission.

1. While in fifth gear, preselect by moving the range lever UP to shift the range selector valve into high range. **Figure 4.4.**
2. Release the accelerator.
3. Press the clutch pedal until the clutch disengages.

NOTE: The range cylinder will automatically shift into high range when the shift lever is in Neutral.

4. Move the shift lever into Neutral.
5. Release the clutch pedal.
6. Allow the engine to slow to the correct RPM.
7. Press the clutch pedal until the clutch disengages.
8. Move the shift lever into sixth gear. **Figure 4.4.**
9. Release the clutch pedal. Apply the accelerator.

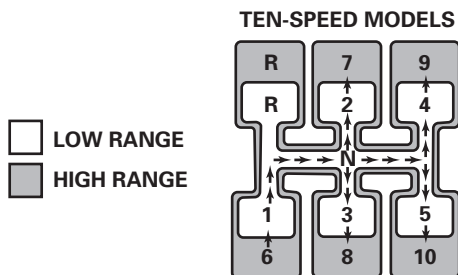
Figure 4.4



Seventh, Eighth, Ninth and Tenth Gears

To upshift into the seventh, eighth, ninth and tenth gears: Repeat Steps 2-9 on page 20, but move the shift lever into the correct seventh, eighth, ninth and tenth gears. **Figure 4.5.**

Figure 4.5

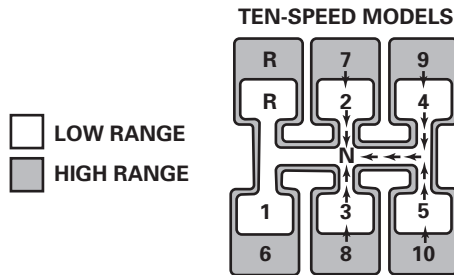


How to Downshift

Tenth, Ninth, Eighth and Seventh Gears

1. Release the accelerator.
2. Press the clutch pedal until the clutch disengages.
3. Move the shift lever to Neutral.
4. Release the clutch pedal.
5. Apply the accelerator to increase the engine speed to the correct RPM.
6. Release the accelerator and immediately press the clutch pedal until the clutch disengages.
7. Move the shift lever into the correct gear. **Figure 4.6.**
8. Release the clutch pedal.

Figure 4.6



Sixth Gear Into Fifth Gear



CAUTION

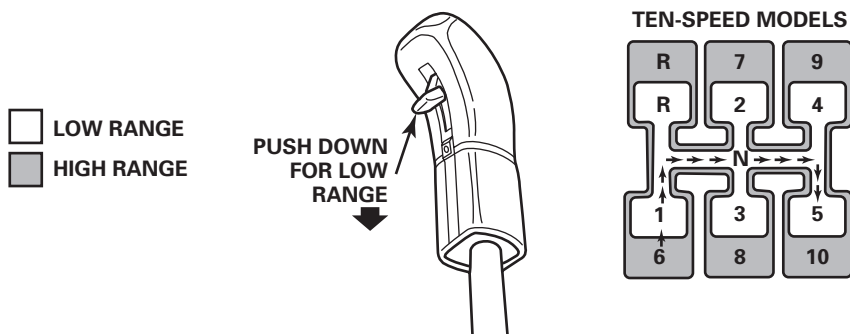
Move the range lever only when the transmission is in gear to prevent damage to the transmission.

1. While in sixth gear, preselect by moving the range lever **DOWN** to shift the range selector valve into low range. **Figure 4.7.**
2. Release the accelerator.
3. Press the clutch pedal until the clutch disengages.

NOTE: The range cylinder will automatically shift into low range when the shift lever is in Neutral.

4. Move the shift lever to Neutral.
5. Release the clutch pedal.
6. Apply the accelerator to increase engine speed to the correct RPM.
7. Press the clutch pedal until the clutch disengages.
8. Move the shift lever into fifth gear.
9. Release the clutch pedal. Apply the accelerator.

Figure 4.7



Section 4

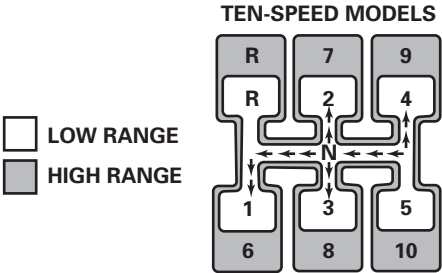
10-Speed Transmissions



Fourth, Third, Second and First Gears

To downshift into fourth, third, second and first gears: Repeat Steps 2-9 on page 23, but move the shift lever into the fourth, third, second and first gears. **Figure 4.8.**

Figure 4.8



Shift Labels Identify a Transmission



CAUTION

Shift patterns vary by vehicle. You must use the correct shift pattern for the transmission in the vehicle you operate to avoid damage to the transmission.

1. Refer to the shift label affixed to the sun visor or instrument panel for instructions on how to shift the transmission.
2. If the label is missing or unreadable, call ArvinMeritor's Commercial Vehicle Aftermarket at 888-725-9355 to order a new label.
3. Install the new label in the vehicle.

Shift Patterns

- Nine-speed standard direct drive and overdrive manual transmissions with A and B ratios. **Figure 5.1.**
- Ten-speed manual transmissions. **Figure 5.2.**

Section 5

Shift Labels



Figure 5.1

9-Speed Transmission

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Upshifting

- Start with range selector in DOWN position
- Shift LO-1-2-3-4
- Raise range control while in 4th
- Shift to 5-6-7-8

Downshifting

- Shift 8-7-6-5
- Move range control DOWN while in 5th
- Shift 4-3-2-1-LO

DO NOT MOVE RANGE CONTROL WHILE MOVING IN REVERSE

Standard

Press top for high range

Press bottom for low range

RANGE CONTROL

2297-T-6104

9-Speed Transmission

MERITOR.

Upshifting

- Start with range selector in DOWN position
- Shift LO-1-2-3-4
- Raise range control while in 4th
- Shift to 5-6-7-8

Downshifting

- Shift 8-7-6-5
- Move range control DOWN while in 5th
- Shift 4-3-2-1-LO

DO NOT MOVE RANGE CONTROL WHILE MOVING IN REVERSE

Standard

Press top for high range

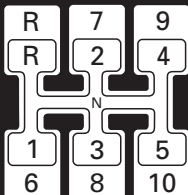
Press bottom for low range

RANGE CONTROL

2297-T-6104

Figure 5.2

10-Speed Transmission



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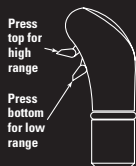
Upshifting

- Start with range selector in DOWN position
- Shift 1-2-3-4-5
- Raise range control while in 5th
- Shift to 6-7-8-9-10

Downshifting

- Shift 10-9-8-7-6
- Move range control DOWN while in 6th
- Shift 5-4-3-2-1

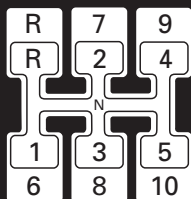
DO NOT MOVE RANGE CONTROL WHILE MOVING IN REVERSE



2297-X-7252

RANGE CONTROL

10-Speed Transmission



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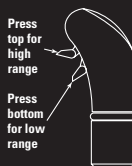
Upshifting

- Start with range selector in DOWN position
- Shift 1-2-3-4-5
- Raise range control while in 5th
- Shift to 6-7-8-9-10

Downshifting

- Shift 10-9-8-7-6
- Move range control DOWN while in 6th
- Shift 5-4-3-2-1

DO NOT MOVE RANGE CONTROL WHILE MOVING IN REVERSE



RANGE CONTROL

2297-X-7252

PTO Operation Decal — Part Number TP-90175

PTO Operation



CAUTION

Use this procedure to put the PTO in the STATIONARY or ENGAGED position and to prevent damage to the transmission.

1. Place the transmission gear shift lever in the NEUTRAL position.
2. Place the range selector lever on the shift knob in the correct range for PTO operation. See the instructions of the PTO manufacturer.
3. Press the clutch pedal to the bottom of travel to disengage the clutch.
4. Move the shift lever to the REVERSE (R) position.
5. Slowly release the clutch pedal until the vehicle starts moving rearward.
6. Press the clutch pedal to the bottom of travel to disengage the clutch. Place the transmission gear shift lever in the NEUTRAL position.
7. Apply the parking brakes.
8. Place the PTO lever in the STATIONARY or ENGAGED position. Operate the PTO according to the procedure of the PTO manufacturer.

To change the position of the range selector lever, repeat the procedure.

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TP-90175

Manual Transmission Oil Capacities*

Transmission Model Numbers	Oil Capacity Pints (Liters)
RM9-115A	20.0 (9.46)
RM9-125A	
RMO9-125A	
RMO9-115B	
RMO9-125B	
RMX9-125A	
RMX9-115B	
RMX9-125B	
RMX9-115R	
RMX9-125R	
RM10-115A	
RM10-125A	
RMX10-115A	
RMX10-125A	
All Other 9- and 10-Speed Models	20.5 (9.7)
RMO13-145A	22.0 (10.406)

* Oil capacities are approximate. Fill the transmission to the bottom of the fill plug hole. On transmissions equipped with an oil pump or oil cooler, operate the engine for five minutes after the initial fill and check the oil level again.

Transmission Oil Specifications

Oil Type	Grade (SAE)	Outside Temperature
Heavy Duty Engine Oil MIL-L-2104B, C or D O or API-SF, -SG, -CD or -CE (Previous API Designations Acceptable)*	50	Above 10°F (-12°C)
	40	Above 10°F (-12°C)
	30	Below 10°F (-12°C)
Mineral Gear Oil with Rust and Oxidation Inhibitor (API-GL-1)*	90	Above 10°F (-12°C)
	80	Below 10°F (-12°C)
Synthetic Oil Meritor Spec. 0-81*	50	All

* Multi-weight and EP gear oils are not recommended. **DO NOT MIX OILS IN THE TRANSMISSION.**



Nine-Speed Transmission Ratios and Steps — “A” Ratio Transmissions

Model Number	Torque Rating (Lb-Ft)	Ratio Overall	Reverse L (LO) Ratio	Reverse H (HI) Ratio	Ratio and Percent Step																	
					L	%	1	%	2	%	3	%	4	%	5	%	6	%	7	%	8	
RM9-115A	1150	13.41	13.17	3.73	13.41	48	9.05	39	6.51	37	4.74	34	3.53	38	2.56	39	1.84	37	1.34	34	1.00	
RM9-125A	1250	13.41	13.17	3.73	13.41	48	9.05	39	6.51	37	4.74	34	3.53	38	2.56	39	1.84	37	1.34	34	1.00	
RM9-135A	1350	13.41	13.17	3.73	13.41	48	9.05	39	6.51	37	4.74	34	3.53	38	2.56	39	1.84	37	1.34	34	1.00	
RM9-145A	1450	13.41	13.17	3.73	13.41	48	9.05	39	6.51	37	4.74	34	3.53	38	2.56	39	1.84	37	1.34	34	1.00	
RM9-155A	1550	13.41	13.17	3.73	13.41	48	9.05	39	6.51	37	4.74	34	3.53	38	2.56	39	1.84	37	1.34	34	1.00	
RMO9-125A	1250	13.41	9.81	2.78	9.99	48	6.74	39	4.85	37	3.53	34	2.63	38	1.91	39	1.37	37	1.00	34	0.74	
RMO9-135A	1350	13.41	9.81	2.78	9.99	48	6.74	39	4.85	37	3.53	34	2.63	38	1.91	39	1.37	37	1.00	34	0.74	
RMO9-145A	1450	13.41	9.81	2.78	9.99	48	6.74	39	4.85	37	3.53	34	2.63	38	1.91	39	1.37	37	1.00	34	0.74	
RMX9-125A	1250	13.41	9.81	2.78	9.99	48	6.74	39	4.85	37	3.53	34	2.63	38	1.91	39	1.37	37	1.00	34	0.74	
RMX9-135A	1350	13.41	9.81	2.78	9.99	48	6.74	39	4.85	37	3.53	34	2.63	38	1.91	39	1.37	37	1.00	34	0.74	
RMX9-145A	1450	13.41	9.81	2.78	9.99	48	6.74	39	4.85	37	3.53	34	2.63	38	1.91	39	1.37	37	1.00	34	0.74	

Nine-Speed Transmission Ratios and Steps — “B” Ratio Transmissions

Model Number	Torque Rating (Lb-Ft)	Ratio Overall	Reverse L (LO) Ratio	Reverse H (HI) Ratio	Ratio and Percent Step																	
					L	%	1	%	2	%	3	%	4	%	5	%	6	%	7	%	8	
RM09-115B	1150	17.74	12.60	3.24	12.83	67	7.69	40	5.48	41	3.89	38	2.81	42	1.98	40	1.41	41	1.00	38	0.72	
RM09-125B	1250	17.74	12.60	3.24	12.83	67	7.69	40	5.48	41	3.89	38	2.81	42	1.98	40	1.41	41	1.00	38	0.72	
RM09-135B	1350	17.74	12.60	3.24	12.83	67	7.69	40	5.48	41	3.89	38	2.81	42	1.98	40	1.41	41	1.00	38	0.72	
RM09-145B	1450	17.74	12.60	3.24	12.83	67	7.69	40	5.48	41	3.89	38	2.81	42	1.98	40	1.41	41	1.00	38	0.72	
RMX9-115B	1150	17.74	12.60	3.24	12.83	67	7.69	40	5.48	41	3.89	38	2.81	42	1.98	40	1.41	41	1.00	38	0.72	
RMX9-125B	1250	17.74	12.60	3.24	12.83	67	7.69	40	5.48	41	3.89	38	2.81	42	1.98	40	1.41	41	1.00	38	0.72	
RMX9-135B	1350	17.74	12.60	3.24	12.83	67	7.69	40	5.48	41	3.89	38	2.81	42	1.98	40	1.41	41	1.00	38	0.72	
RMX9-145B	1450	17.74	12.60	3.24	12.83	67	7.69	40	5.48	41	3.89	38	2.81	42	1.98	40	1.41	41	1.00	38	0.72	
RMX9-155B	1550	17.74	12.60	3.24	12.83	67	7.69	40	5.48	41	3.89	38	2.81	42	1.98	40	1.41	41	1.00	38	0.72	

Nine-Speed Transmission Ratios and Steps — “R” Ratio Transmissions

Model Number	Torque Rating (Lb-Ft)	Ratio Overall	Reverse L (LO) Ratio	Reverse H (HI) Ratio	Ratio and Percent Step																	
					L		%	1	%	2	%	3	%	4	%	5	%	6	%	7	%	8
RMX9-115R	1150	13.74	10.79	2.78	10.99	40	7.87	43	5.52	42	3.89	37	2.83	40	2.02	43	1.42	42	1.00	25	0.80	
RMX9-125R	1250	13.74	10.79	2.78	10.99	40	7.87	43	5.52	42	3.89	37	2.83	40	2.02	43	1.42	42	1.00	25	0.80	
RMX9-135R	1350	13.74	10.79	2.78	10.99	40	7.87	43	5.52	42	3.89	37	2.83	40	2.02	43	1.42	42	1.00	25	0.80	
RMX9-145R	1450	13.74	10.79	2.78	10.99	40	7.87	43	5.52	42	3.89	37	2.83	40	2.02	43	1.42	42	1.00	25	0.80	



32 Ten-Speed Transmission Ratios and Steps — “A” Ratio Transmissions

Model Number	Torque Rating (Lb-Ft)	Ratio Overall	Reverse L (LO) Ratio	Reverse H (HI) Ratio	Ratio and Percent Step																		
					1	%	2	%	3	%	4	%	5	%	6	%	7	%	8	%	9	%	10
RM10-115A	1150	15.02	16.71	3.73	15.02	35	11.14	35	8.26	37	6.02	34	4.48	34	3.35	35	2.48	35	1.84	37	1.34	34	1.00
RM10-125A	1250	15.02	16.71	3.73	15.02	35	11.14	35	8.26	37	6.02	34	4.48	34	3.35	35	2.48	35	1.84	37	1.34	34	1.00
RM10-135A	1350	15.02	16.71	3.73	15.02	35	11.14	35	8.26	37	6.02	34	4.48	34	3.35	35	2.48	35	1.84	37	1.34	34	1.00
RM10-145A	1450	15.02	16.71	3.73	15.02	35	11.14	35	8.26	37	6.02	34	4.48	34	3.35	35	2.48	35	1.84	37	1.34	34	1.00
M-14F10A-M16	1450	15.02	16.71	3.73	15.02	35	11.14	35	8.26	37	6.02	34	4.48	34	3.35	35	2.48	35	1.84	37	1.34	34	1.00
RM10-155A	1550	15.02	16.71	3.73	15.02	35	11.14	35	8.26	37	6.02	34	4.48	34	3.35	35	2.48	35	1.84	37	1.34	34	1.00
RD10-145A	1650	15.02	16.71	3.73	15.02	35	11.14	35	8.26	37	6.02	34	4.48	34	3.35	35	2.48	35	1.84	37	1.34	34	1.00
RMX10-115A	1150	15.02	12.45	2.78	11.19	35	8.30	35	6.15	37	4.48	34	3.34	34	2.50	35	1.85	35	1.37	37	1.00	34	0.74
RMX10-125A	1250	15.02	12.45	2.78	11.19	35	8.30	35	6.15	37	4.48	34	3.34	34	2.50	35	1.85	35	1.37	37	1.00	34	0.74
RMX10-135A	1350	15.02	12.45	2.78	11.19	35	8.30	35	6.15	37	4.48	34	3.34	34	2.50	35	1.85	35	1.37	37	1.00	34	0.74
RMX10-145A	1450	15.02	12.45	2.78	11.19	35	8.30	35	6.15	37	4.48	34	3.34	34	2.50	35	1.85	35	1.37	37	1.00	34	0.74
MO-14F10A-16	1450	15.02	16.71	2.78	11.19	35	8.30	35	6.15	37	4.48	34	3.34	34	2.50	35	1.85	35	1.37	37	1.00	34	0.74
RMX10-155A	1550	15.02	12.45	2.78	11.19	35	8.30	35	6.15	37	4.48	34	3.34	34	2.50	35	1.85	35	1.37	37	1.00	34	0.74
RMX10-165A	1650	15.02	12.45	2.78	11.19	35	8.30	35	6.15	37	4.48	34	3.34	34	2.50	35	1.85	35	1.37	37	1.00	34	0.74
RMX10-115C	1150	17.53	19.49	2.88	12.72	38	9.23	37	6.75	37	4.92	38	3.57	38	2.58	38	1.88	37	1.37	37	1.00	38	0.73
RMX10-125C	1250	17.53	19.49	2.88	12.72	38	9.23	37	6.75	37	4.92	38	3.57	38	2.58	38	1.88	37	1.37	37	1.00	38	0.73
RMX10-135C	1350	17.53	19.49	2.88	12.72	38	9.23	37	6.75	37	4.92	38	3.57	38	2.58	38	1.88	37	1.37	37	1.00	38	0.73
RMX10-145C	1450	17.53	19.49	2.88	12.72	38	9.23	37	6.75	37	4.92	38	3.57	38	2.58	38	1.88	37	1.37	37	1.00	38	0.73
MO-14F10C-M16	1450	17.53	19.49	2.88	12.72	38	9.23	37	6.75	37	4.92	38	3.57	38	2.58	38	1.88	37	1.37	37	1.00	38	0.73
RMX10-155C	1550	17.53	19.49	2.88	12.72	38	9.23	37	6.75	37	4.92	38	3.57	38	2.58	38	1.88	37	1.37	37	1.00	38	0.73
RMX10-165C	1650	17.53	19.49	2.88	12.72	38	9.23	37	6.75	37	4.92	38	3.57	38	2.58	38	1.88	37	1.37	37	1.00	38	0.73
MO-16F10C-M18	1650	17.53	19.49	2.88	12.72	38	9.23	37	6.75	37	4.92	38	3.57	38	2.58	38	1.88	37	1.37	37	1.00	38	0.73

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