

PRO-SHIFT  
16- AND 18-SPEED  
TRANSMISSIONS

**SPICER®**



**TTC**

# SIXTEEN OR EIGHTEEN GEARS WITH ONLY FOUR SHIFTS

**J**ust shifting most multi-speed transmissions is a full-time job. Between shifting and clutching, most leave the driver worn out and confused by the end of the day. But not with Spicer's 16- and 18- speeds. Our easy, no-repeat, splitter-shifted design means only four lever shifts from first to cruise. All the other shifts are handled by your finger on the splitter button.

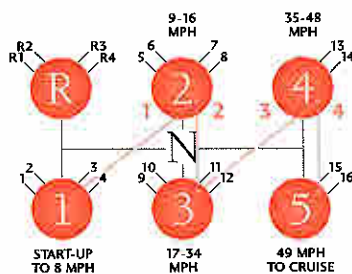
If you're running light loads on the interstate, the Spicer 16- and 18-speeds accommodate skip-shifting of 13, 10, or even fewer gears. What's more, there's only a single button-shift between 49 MPH and top-gear speed. The result is drivers who are more energetic and alert at the end of the day, which can reduce driver turnover, and may even reduce fatigue related accidents.



## VERSATILITY FOR A WIDE RANGE OF APPLICATIONS

These new transmissions were specifically developed to handle changing application needs. Both feature deep starting gear ratios of over 14:1 to get you moving with a full load. Small, manageable steps between gears mean you can more closely match the gear to the grade.

### 16-SPEED SHIFT PATTERN

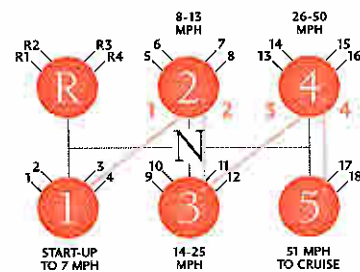


Top-end speed and fuel economy for both models are enhanced by an overdrive. This allows for specing of deep reduction axle ratios for exceptional startability and gradability when you need them. For safe controlled backing, even on grades, Spicer 16- and 18-speeds also provide four reverse gears, including a deep ratio.

Regardless of which Spicer multi-speed transmission you choose, the close steps

in gearing make these transmissions an excellent choice for applications where the terrain frequently changes. Close steps also eliminate the problem of being gear-bound in mountainous terrain.

### 18-SPEED SHIFT PATTERN



## DURABILITY BUILT IN

Spicer 16- and 18-speeds incorporate a curvic clutch collar design, so the need for an expensive synchronizer is eliminated. And because Spicer's curvic clutch is more durable than range box synchronizers, you get greater reliability and longer life. So you save in initial cost now and reduced maintenance later.

## BACKED BY SPICER SERVICE AND SUPPORT

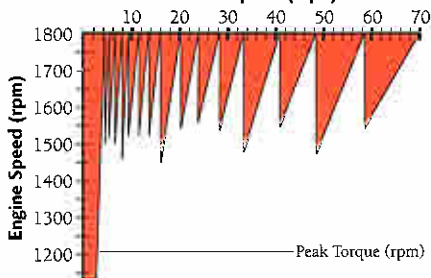
The Spicer 16- and 18-speed transmissions are designed to provide increased payload capacity, optimum durability, and low ownership costs. Every transmission we make is backed by a network of factory-trained

service representatives. In addition, we also offer same day shipment of parts—nationwide. We can even help you train your own maintenance personnel to make them as efficient and effective as possible.

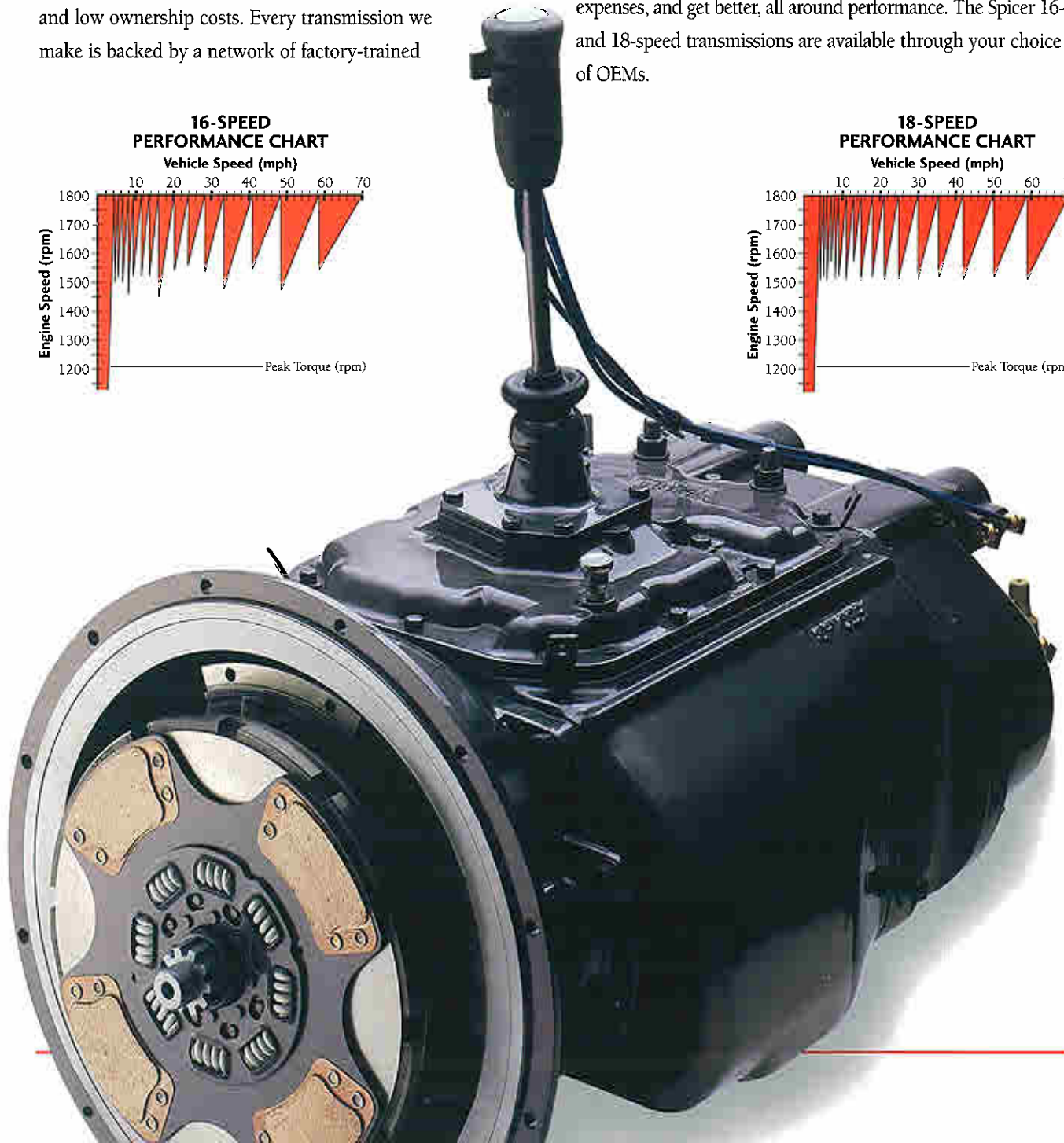
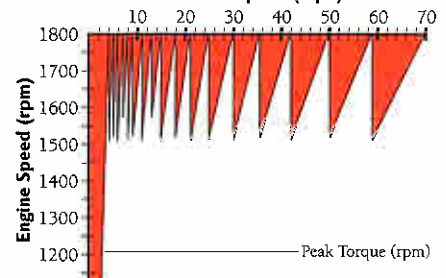
## FOR MORE INFORMATION ON THE SPICER 16- AND 18-SPEEDS, CALL 800-666-8688

The Spicer 16- and 18-speeds are another example of Spicer Transmission Division's continuing commitment to innovation and the trucking industry. So, before you spec your next heavy-duty vehicle, call our toll-free number. We'll show you how to get a jump on the competition, decrease your operating expenses, and get better, all around performance. The Spicer 16- and 18-speed transmissions are available through your choice of OEMs.

**16-SPEED  
PERFORMANCE CHART**  
Vehicle Speed (mph)



**18-SPEED  
PERFORMANCE CHART**  
Vehicle Speed (mph)



## SPECIFICATIONS

MODEL NO.	TORQUE CAPACITY	GVW/GCW*
PSO150-16B	1,500 lb.ft.	120,000 lbs.
PSO165-16B	1,650 lb.ft.	140,000 lbs.
PSO175-16B	1,750 lb.ft.	140,000 lbs.
PSO175-16M	1,750 lb.ft.**	140,000 lbs.
PSO165-18A	1,650 lb.ft.	140,000 lbs.
PSO175-18A	1,750 lb.ft.	140,000 lbs.
PSO175-18M	1,750 lb.ft.**	140,000 lbs.

	16 SPEED	18 SPEED
Ratio Coverage	17.7:1	16.92:1
Length	34.81"	34.81"
Weight	796 lbs.	796/811 lbs.
Input Shaft	2" x 10 Spline	2" x 10 Spline
Output Shaft	2.596" x 20-Spline	2.596" x 20-Spline
Clutch Housing	SAE # 1 or 2	SAE # 1 or 2
Clutch	Spicer 14" or 15-1/2"	Spicer 14" or 15-1/2"
Lube Capacity	30 Pints	30 Pints
Speedometer	Specify Mech., Elect.	Specify Mech., Elect.

\* All other applications require Spicer Engineering approval.

\*\* M ratios include internal lube pump. External pump available on all others.

## TOTAL REDUCTION

16 SPEED WITH 14.52 1ST GEAR		18 SPEED WITH 14.21 1ST GEAR	
AXLE RATIO	TOTAL REDUCTION	AXLE RATIO	TOTAL REDUCTION
2.9	42.1:1	2.9	41.2:1
3.06	44.4:1	3.06	43.5:1
3.21	46.6:1	3.21	45.6:1
3.42	49.7:1	3.42	48.6:1
3.55	51.5:1	3.55	50.4:1
3.73	54.2:1	3.73	53.0:1
3.90	56.6:1	3.90	55.4:1
4.10	59.5:1	4.10	58.3:1
4.33	62.9:1	4.33	61.5:1
4.44	64.5:1	4.44	63.1:1
4.56	66.2:1	4.56	64.8:1
4.63	67.2:1	4.63	65.8:1
4.88	70.9:1	4.88	69.3:1
5.29	76.8:1	5.29	75.2:1
5.86	85.1:1	5.86	83.3:1

## GEAR RATIOS

GEAR	RATIO	%STEP	GEAR	RATIO	%STEP
<b>16 SPEED</b>			<b>18 SPEED</b>		
1st	14.52	21%	1st	14.21	19%
2nd	11.97	20%	2nd	11.97	18%
3rd	9.96	21%	3rd	10.10	19%
4th	8.21	21%	4th	8.53	14%
5th	6.81	21%	5th	7.46	19%
6th	5.61	20%	6th	6.28	18%
7th	4.67	21%	7th	5.32	19%
8th	3.85	22%	8th	4.48	15%
9th	3.15	21%	9th	3.89	19%
10th	2.60	20%	10th	3.27	18%
11th	2.16	21%	11th	2.77	19%
12th	1.78	22%	12th	2.33	19%
13th	1.46	22%	13th	1.96	19%
14th	1.20	20%	14th	1.65	18%
15th	1.00	22%	15th	1.40	19%
16th	0.82		16th	1.18	18%
			17th	1.00	19%
			18th	0.84	
Rev. 1	14.52		Rev. 1	14.52	
Rev. 2	11.97		Rev. 2	11.97	
Rev. 3	9.96		Rev. 3	10.13	
Rev. 4	8.21		Rev. 4	8.53	

## TOP-GEARED AVERAGE MPH

### ENGINE GOVERNED RPM

AXLE RATIO	1400	1500	1600	1700	1800	1900	2000	2100
3.06	64							
3.21	61	65						
3.42	57	61	65					
3.55	55	59	63	67				
3.73	52	56	60	64	67			
3.90	50	54	57	61	65	68		
4.10		51	55	58	61	65	68	
4.33			52	55	58	61	65	
4.44			50	54	57	60	63	66
4.56				52	55	58	61	64
4.63				51	54	57	60	63
4.88					52	54	57	60
5.29						50	53	56
5.86								50

With tires @ 517 revolutions per mile.

## POWER TAKE-OFF APPLICATIONS

### PT.O. GEAR DATA

6-Bolt Right, 8-Bolt Bottom Left

Hand Valve Position 1 & 3 - 43% Engine Speed

Hand Valve Position 2 & 4 - 52% Engine Speed

54 Tooth, 20 Degree Pressure Angle

Countershaft P.T.O. Optional



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