**ANSWER KEY**

**Distance Learning Exercise #40: Multiple Countershaft Powerflow**

1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sliding Clutch 1** | **Sliding Clutch 2** | **Sliding Clutch 1** | **Split** | **Range** |
| **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **REAR** | **FWD** | **REAR** |
|[ ] [x] [ ] [ ] [x] [ ] [x] [ ] [ ] [x] [ ] [ ] [x]

2.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sliding Clutch 1** | **Sliding Clutch 2** | **Sliding Clutch 1** | **Split** | **Range** |
| **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **REAR** | **FWD** | **REAR** |
|[ ] [x] [ ] [ ] [ ] [x] [ ] [x] [ ] [ ] [x] [ ] [x]

3.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sliding Clutch 1** | **Sliding Clutch 2** | **Sliding Clutch 1** | **Split** | **Range** |
| **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **REAR** | **FWD** | **REAR** |
|[ ] [ ] [x] [ ] [x] [ ] [ ] [x] [ ] [x] [ ] [ ] [x]

4.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sliding Clutch 1** | **Sliding Clutch 2** | **Sliding Clutch 1** | **Split** | **Range** |
| **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **REAR** | **FWD** | **REAR** |
|[ ] [x] [ ] [ ] [x] [ ] [ ] [ ] [x] [ ] [x] [x] [ ]

5.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sliding Clutch 1** | **Sliding Clutch 2** | **Sliding Clutch 1** | **Split** | **Range** |
| **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **REAR** | **FWD** | **REAR** |
|[ ] [ ] [x] [ ] [x] [ ] [ ] [x] [ ] [x] [ ] [x] [ ]

6.

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| --- | --- | --- | --- | --- |
| **Sliding Clutch 1** | **Sliding Clutch 2** | **Sliding Clutch 1** | **Split** | **Range** |
| **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **REAR** | **FWD** | **REAR** |
|[ ] [x] [ ] [x] [ ] [ ] [ ] [x] [ ] [x] [ ] [ ] [x]

7.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sliding Clutch 1** | **Sliding Clutch 2** | **Sliding Clutch 1** | **Split** | **Range** |
| **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **REAR** | **FWD** | **REAR** |
|[ ] [ ] [x] [ ] [x] [ ] [ ] [x] [ ] [x] [ ] [ ] [x]

8.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sliding Clutch 1** | **Sliding Clutch 2** | **Sliding Clutch 1** | **Split** | **Range** |
| **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **REAR** | **FWD** | **REAR** |
|[ ] [x] [ ] [x] [ ] [ ] [ ] [x] [ ] [ ] [x] [x] [ ]

9.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sliding Clutch 1** | **Sliding Clutch 2** | **Sliding Clutch 1** | **Split** | **Range** |
| **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **REAR** | **FWD** | **REAR** |
|[x] [ ] [ ] [ ] [x] [ ] [ ] [x] [ ] [x] [ ] [x] [ ]

10.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sliding Clutch 1** | **Sliding Clutch 2** | **Sliding Clutch 1** | **Split** | **Range** |
| **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **N** | **REAR** | **FWD** | **REAR** | **FWD** | **REAR** |
|[ ] [ ] [x] [ ] [x] [ ] [ ] [x] [ ] [ ] [x] [x] [ ]